Landfill Environmental Management Plan

For
Woodlawn Bioreactor

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1	Final for submission to DPE	Department of Environment & Planning	Ramona Bachu	14 April 2016
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Contents

Definitions/Abbreviations

AEMR	Annual Environmental Management Report
AHD	Australian Height Datum
BTT	Banksmeadow Transfer Terminal
CLC	Community Liaison Committee
COC	Development Conditions of Consent
CTT	Clyde Transfer Terminal
DA	Development Application
DPE	Department of Planning and Environment
DPI	Department of Primary Industries
EA	Environmental Assessment
ED1 ED	Evaporation Dam 1 Effluent Dam (also referred as ED1 Coffer Dam)
EIS	Environmental Impact Statement
EMR	Environmental Management Representative
EPA	NSW Environment Protection Authority
EP&A	Environmental Planning and Assessment Act 1979
EPL	Environment Protection Licence
GMC	Goulburn Mulwaree Council
HDPE	High density polyethylene
IMF	Crisps Creek Intermodal Facility
LEMP	Landfill Environmental Management Plan
LEP	Local Environmental Plan
LGA	Local Government Area
LTP	Leachate Treatment Plant
PA	Project Approval
POEO	Protection of the Environment Operations Act 1997
RMS	NSW Roads and Maritime Services
SEPP	State Environmental Planning Policy
SML20	Special (Crown & Private Lands) Mining Lease 20
TPA	Tonnes per Annum
WMBT	Woodlawn Mechanical Biological Treatment Facility

Section 1 Introduction

1.1 Overview

Veolia Australia and New Zealand (Veolia) own and operate the Woodlawn Eco Precinct, which is located in the Southern Highlands of NSW, approximately 250 kilometres (km) South West of Sydney (refer to figure 1.1).

The Eco Precinct consists of two properties on approximately 6,000 hectares (ha)of land, namely Woodlawn and Pylara and includes the area of the Special (Crown & Private Lands) Lease 20 (SML 20), encompassing the Woodlawn Mine, a former lead, copper and zinc mine which ceased mining operations in 1998. The first stage of the Eco Precinct developed by Veolia was the Woodlawn Bioreactor (the Bioreactor), which commenced operations in September 2004 and is located in the void of the former Woodlawn Mine.

The Woodlawn Eco Precinct is made up of the following components;

- Crisps Creek Intermodal Facility (IMF)
- Bioreactor
- Bioenergy
- Mechanical Biological Treatment (MBT) Facility
- Leachate Treatment Plant (LTP)
- Pylara and Woodlawn farm
- Fish Farm
- Woodlawn Wind Farm (operated by Infigen Energy)

The Bioreactor has considerable capacity to receive putrescible waste generated from both Sydney and surrounding areas of regional NSW. On the basis of this, a modification application was sought by Veolia to remove the arbitrary annual waste input limits into the Bioreactor, and in response to the *Wright Corporate Strategies' Public Review – Landfill Capacity and Demand* (the Wright Review, 2009). The Wright Review was an independent review commissioned by the Minister for Planning to examine critical issues such as the continuing need for putrescible waste landfill capacity, regional disposal capacity and demand.

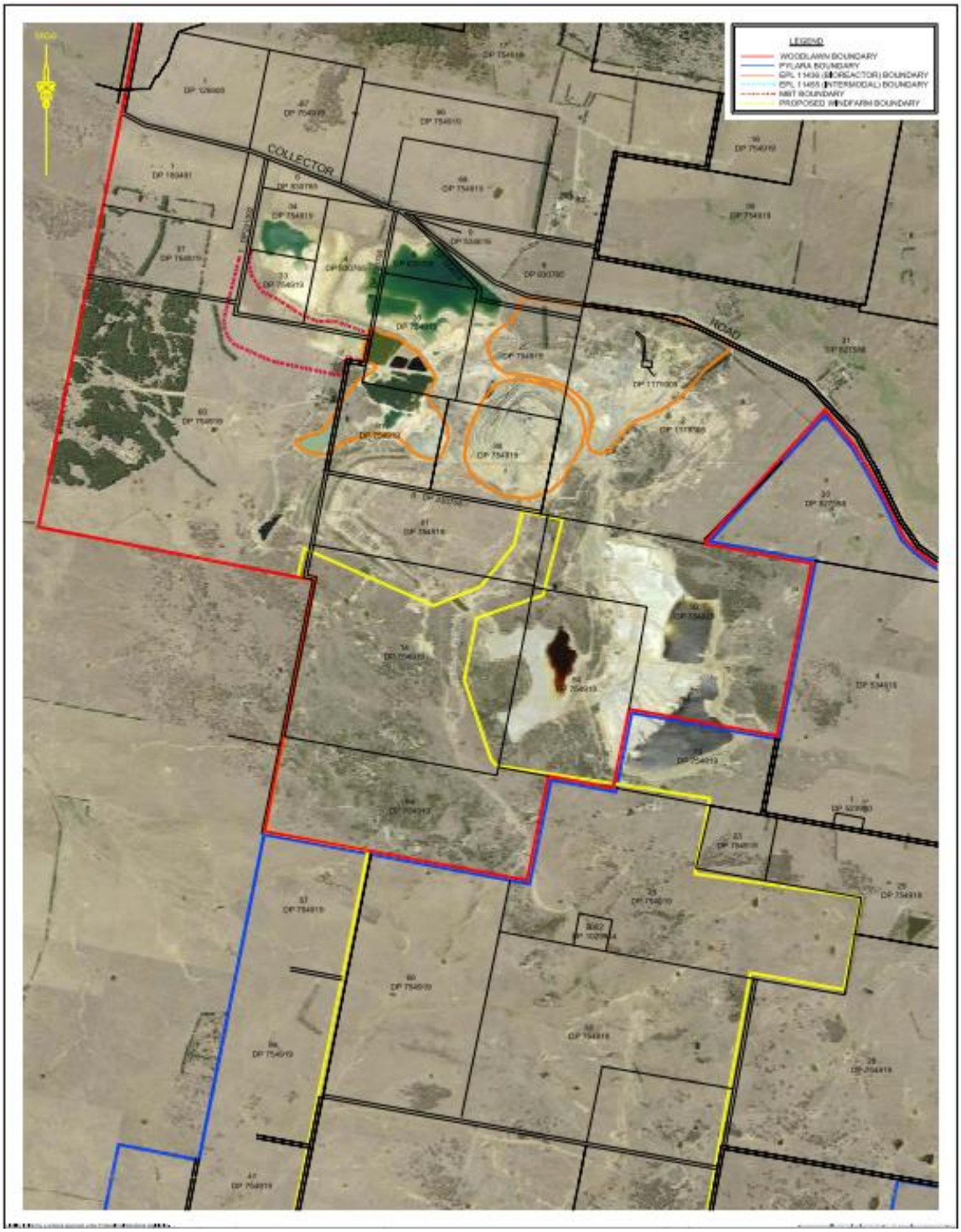

Figure 1. Eco Precinct Location Plan

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On 16 March 2012, the Department of Planning and Environment (DPE) granted approval for the Bioreactor to increase its annual maximum input rate from 500,000 tonnes per annum (TPA) to 1,130,000 TPA, referred to thereon as the expanded operations.

On 9 September 2016, DPE approved the long-term leachate management strategy (LTLM Strategy) for improving the extraction and treatment of leachate from the waste mass by installing a new membrane bioreactor (MBR) treatment plant to treat leachate at a faster rate and produce a much higher quality effluent.

Modification of the PA 10_0012 MOD 2 & DA 31-02-99 MOD 3 for the construction and operations of the long–term leachate management strategy including the Leachate Treatment Plant was approved by DPE on 22 December 2017.

This Landfill Environmental Management Plan (LEMP) defines the site-specific environment management tools to be used for the operation for the Bioreactor and LTP and has been prepared to reflect the requirements of Project Approval (PA) 10_0012, the original Development Application (DA) No. 31-02-99 and the Environmental Guidelines: Solid Waste Landfills (NSW Environment Protection Authority 1996).

1.1.1 Eco Precinct Context

The Eco Precinct has been developed in stages by Veolia to encompass innovative practices, supplemented with renewable energy. Access to the Site is off Collector Road, which runs in an east-west direction from its intersection with Bungendore Road. The operations that form part of the Eco Precinct is described in Table 1.1 and depicted in Figure 1.2:

Table 1.1 Eco Precinct Operations

Operation	Description
The Bioreactor, including the Woodlawn Bioenergy Power Station (the Power Station);	The Bioreactor was the first stage of the Eco Precinct developed by Veolia. Landfilling operations, which commenced in September 2004 are located in the Bioreactor of the former open cut Woodlawn Mine. Waste is deposited in the Bioreactor and with the use of optimal moisture and temperature conditions, achieves enhanced degraded to produce landfill gas, collected through a vast network of infrastructure within the Bioreactor. Methane is extracted from the landfill gas within the Power Station for conversion and supply as electricity into the energy grid. The Bioreactor forms part of Veolia's integrated waste management services and is augmented with the following transfer facilities: • The Crisps Creek Intermodal Facility (IMF). • The Clyde Transfer Terminal (CTT) in Sydney; and • The Banksmeadow Transfer Terminal (BTT) in Sydney (operational from mid 2016). Refer to Chapter 3 for detailed description
The Crisps Creek Intermodal Facility (IMF)	The IMF, which forms an integral part of the logistical operations of the Eco Precinct, is located 8km from the Bioreactor in the township of Tarago, adjacent to the Goulburn-Bombala Railway line. Waste containers transported from the Sydney region vial rail are unloaded and transferred onto road trailers at the IMF for transport to the Bioreactor. The IMF was approved to accept 1,180,000 TPA from Sydney when the Bioreactor was granted expanded operations.
Aquaculture and horticulture operations;	In keeping with the objectives of utilising as many resources as possible within the Woodlawn Eco Precinct, Veolia has been looking for ways to utilise the waste heat created through the production of renewable energy from the landfill gas. As a part of this project, Veolia is using waste heat from the Power Station's engines in aquaculture operations to cultivate fish, with a horticultural system operating to remove excess nutrients.
Woodlawn and Pylara farms;	The original Woodlawn mine site included an operating farm on the property, which acted as a buffer zone during the mine operations. When Veolia was granted development consent for the Woodlawn Bioreactor, the condition of the development consent required Veolia to acquire the neighbouring farm

	Pylara to create a larger buffer zone around the Bioreactor operations. The surrounding land on the 3,000 ha Woodlawn property is utilised either for farming practices or requires rehabilitation from former mining activities. Adjacent to the south of the Woodlawn property is the 3,000 ha Pylara property, a working farm which utilises sustainable farming practices such as a sheep breeding program that includes genetic selection, nutrition and grazing rotation, to increase meat and wool productivity and reduce impacts on soils.
The Woodlawn Wind Farm (the Wind Farm) operated by Infigen Energy and	The 48 MW Woodlawn Wind Farm comprises 23 turbines and is located along a ridgeline running through both the Woodlawn and Pylara properties. This operation commenced in 2011. While on Veolia land it is owned and operated by Infigen Energy and supplements the Eco Precinct's renewable energy production.
The Woodlawn Mechanical Biological Treatment (MBT) Facility (operational from mid 2017)	The MBT Facility was approved in 2007 and is located to the north-west of the Bioreactor as illustrated in 1. At full capacity, it will receive up to 280,000 tpa of mixed waste from Councils (SSROC and NSROC) in Sydney Metropolitan Area. The waste is processed to extract recyclable materials or produce compost. The compost is matured on site and used to rehabilitate the mine. Changes to site layout, technology and operating hours were approved in 2014. Stage 1 of the facility which recently commenced operations is able to process up to 144,000 tpa of MSW and 40,000 tpa of green waste of the approved 280,000 tpa.
The Woodlawn Leachate Treatment Plant (LTP) (operational from end of 2018)	Veolia's modification application with Department of Planning and Environment (DPE) for construction and operations of leachate treatment plant (LTP) to process leachate was approved on 22 December 2017. Construction of the LTP commenced following the approval and it is anticipated that the LTP will accept leachate by 30 September 2018. The LTP will facilitate better environmental and operational performance by allowing Veolia to extract and treat greater volumes of leachate from the Bioreactor and minimise and reduce the generation of odour, and enable more efficient gas extraction maximizing the waste to energy benefits of the Bioreactor.

In addition to these operations, Heron Resources Limited (formerlyTriAusMin Pty Ltd) was granted planning approval for the Woodlawn Mine Project (Application No. 07_0143) to recommence mining operations within the Eco Precinct for both re-mining of existing tailings dams and further underground mining. There are remnant mining degraded areas within the Eco Precinct that are subject to remediation requirements under the SML20 mining lease. The compost derived from the MBT Facility shall provide for the undertaking of this remediation in agreement between Veolia and Heron.

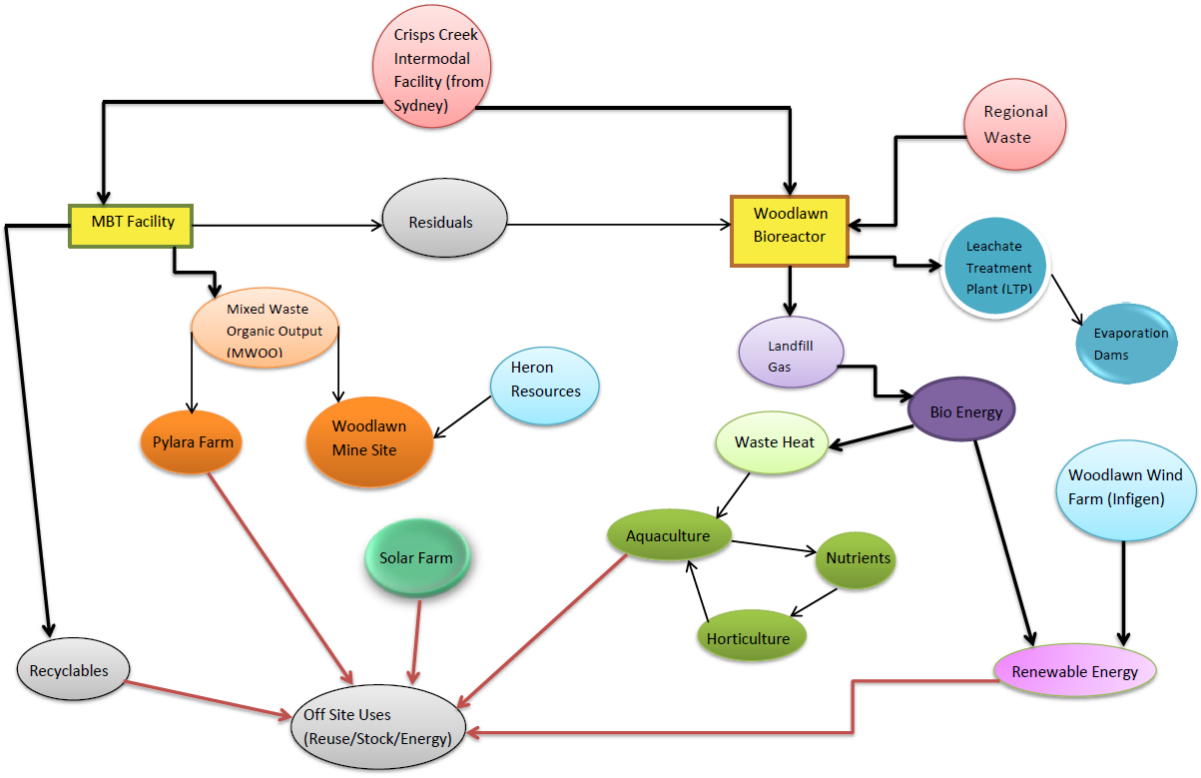


Figure 1.2 The Eco Precinct Context

1.1.2 Auxiliary Operations

The Eco Precinct and its operations form part of Veolia's integrated waste management services and are augmented with the following transfer facilities in Sydney:

- The Clyde Transfer Terminal (CTT); and
- The Banksmeadow Transfer Terminal (BTT).

The CTT receives up to 500,000 TPA of putrescible waste from within the Sydney Metropolitan Area (SMA) from municipal, commercial and industrial sectors of the SMA, which is unloaded, screened, compacted and containerised into shipping containers for transport via rail to the IMF.

In order to facilitate the expansion of the Eco Precinct through the increased waste receipt capability of the Bioreactor and the MBT Facility, Veolia has constructed an additional waste transfer station and associated rail infrastructure at an existing industrial site in Banksmeadow (southern Sydney).

The Banksmeadow Transfer Terminal (BTT) in Sydney receives up to 400,000 TPA of putrescible waste similarly to the CTT. Waste from the BTT is destined for either the Bioreactor or the MBT Facility, depending on Veolia's contractual obligations with its customers.

1.2 Scope and Objectives

The purpose of this LEMP is to provide an overview of the potential environmental impacts of the Bioreactor and LTP and describe the management and mitigation measures to protect the environment on site and sensitive receivers off site.

The key objectives of this LEMP are to provide:

- An overview of the Bioreactor and LTP operations (refer Site Plans in Appendix A);
- A guidance document for specifying regulatory requirements and interacting with relevant Government authorities (refer to Regulatory and Policy Documents in Appendix B and the Condition Compliance Report in Appendix C);
- An environmental management tool for the operation of the Bioreactor and LTP;
- A means of identifying and concentrating on the key environmental, operational and rehabilitation issues (refer supplementary Environment Management Plans in Appendix D); and
- A basis for monitoring, reporting and maintaining compliance with both Veolia and regulatory requirements for the Bioreactor and LTP;

The LEMP documents the main waste related operations for the Bioreactor and the LTP, which comprise:

- Receival of waste at the Bioreactor;
- Unloading of waste from the containers at the Bioreactor, using a tipping platform;
- Managing waste within the Bioreactor;
- Recirculating and treating leachate within and out of the Bioreactor;
- Collecting and extracting landfill gas from the Bioreactor for energy generation in the Power Station; and all associated processes.
- Treatment of the leachate within the Leachate Treatment Plant

Operations related to the Eco Precinct, but not part of this LEMP is:

- Receival, compaction and loading of waste at the CTT and BTT facilities;
- Transfer of the waste (and empty) containers by rail between Sydney and Tarago; and

- Loading and unloading waste containers to and from semi-trailers at the IMF for transfer to the Bioreactor.

The MBT facility enables processing of mixed waste to extract recyclable material and produce compost. The LEMP is a working document, and the management strategies outlined are intended for review periodically. Where necessary, the LEMP shall be amended as new strategies and technologies become available.

1.3 Supporting Environmental Management Plans

This section details the supplementary environmental management plans that deal with all aspects of the operational and post closure stages of the Bioreactor and LTP as part of the LEMP. These plans have been prepared in accordance with the conditions of Development Consent, the PA and EPL for the Bioreactor.

1.3.1 Air Quality and Greenhouse Gas Management Plan

The Air Quality and Greenhouse Management Plan (AQGGMP) incorporate the Dust Management Plan and the Odour Management Plan. The Plan is aimed at detailing the measures that will be implemented at the Bioreactor and LTP to gather ongoing ambient air quality monitoring data, manage the air quality (including dust and odour) and greenhouse gas impacts and ensure compliance with all regulatory requirements.

This document forms **Appendix D1** of the LEMP. The AQGMP also includes a program for monitoring the air quality impacts of the Bioreactor. The program includes specifications and monitoring of dust, odour and landfill gas emissions, controls and measures for compliance against the POEO Act and relevant regulations.

1.3.2 Soil and Water Management Plan

The Soil and Water Management Plan (SWMP) considers the soil and water management at the Bioreactor and LTP and is provided in **Appendix D2** of the LEMP. The SWMP includes details of a water balance for the Bioreactor, a surface water and groundwater monitoring program and details the measures to be implemented to minimise water use, control soil erosion, prevent water quality (groundwater and surface water) contamination from site operations and comply with adopted surface water discharge limits. The surface water monitoring program includes all aspects of the drainage and storage systems at the Bioreactor, including the storage capacity of Evaporation Dam 3 (ED3) and contingency measures in the event of exceedance.

1.3.3 Leachate Management Plan

The Leachate Management Plan (LMP) incorporates the details of the leachate barrier system installed at the Bioreactor, measures to collect and store all leachate generated by the Bioreactor, treatment of leachate within the LTP and prevent leachate from escaping to surface water, groundwater or surrounding subsoils. The LMP also provides information on the diversion of all surface water not exposed to waste or leachate from the leachate management system and the treatment of all waters that have come in contact with waste or contaminated with leachate. This plan also incorporates the Leachate Contingency Management Plan is appended to the LEMP as **Appendix D3**

1.3.4 Noise Monitoring and Management Plan

The Noise Management and Monitoring Plan (NMMP) detail measures and strategies for managing noise at the Bioreactor and LTP arising from waste operations and forms **Appendix D4** of the LEMP. A Noise Management Protocol provides mitigation measures to minimise the noise impacts of the operations at the Bioreactor.

1.3.5 Landscape and Vegetation Management Plan

The Landscape and Vegetation Management Plan (LVMP) details landscaping and revegetation measures for the Bioreactor. This plan also incorporates the Pest and Weed Management Plan and is appended as **Appendix D5** of the LEMP.

1.3.6 Emergency Response Plan

The NSW Woodlawn Bioreactor and IMF Emergency Response Plan (PRO-NSW-218-049) (ERP) incorporates the Fire and Emergency Management Plan as stipulated in the PA and the Pollution Incident Response Management Plan to address the requirements of the Bioreactor's EPL and the consent. The ERP provides procedures for controlling and minimising potential risk to people and the environment at the Bioreactor in the event of an emergency. The plan is appended to this LEMP as **Appendix D6.**

1.3.7 Other Plans

In addition the supplementary EMPs above, the LEMP is also supported with the following plans:

1.3.7.1 Closure and Remediation Management Plan

The Closure and Remediation Management Plan outlines the monitoring and maintenance requirements after the filling operations have ceased, and rehabilitation. This plan also incorporates the Post Closure Landfill Rehabilitation Management Plan.

1.3.7.2 Bioreactor Performance Management Plan

The Bioreactor Performance Management Plan incorporates the following management plans:

- **Barrier System and Quality Assurance Plan**: deals with the construction of the base liner for the bioreactor and the requirements in relation to the sealing of joints and cracks in the Bioreactor walls.
- **Geotechnical Stability Monitoring Plan**: details all aspects of the requirements for monitoring the stability of the walls surrounding the Bioreactor and procedures for working with any geotechnical instabilities during landfilling operations.
- **Bioreactor Performance Monitoring Plan**: details a monitoring program designed to assess the overall efficiency of the Bioreactor.

1.3.7.3 Gas Management Plan

The Gas Management Plan deals with all aspects of the management of landfill gas generated in the Bioreactor. This plan incorporates the Surface and Subsurface Gas Monitoring Plan.

1.3.7.4 Waste Management Plan

The Waste Management Plan incorporates the Filling Schedule for the Bioreactor which details the filling and compaction rates for the waste, and estimates the consumption of the Bioreactor space on the basis of these rates.

Section 2 Statutory And Policy Considerations

This section provides an overview of the environmental planning and statutory context for the operations of the Bioreactor. Veolia is committed to complying with all of its legal obligations and other voluntary commitments made by the company. Compliance to applicable regulatory requirements concerning the operations of the Bioreactor will be achieved through:

- identifying and accessing legal and other requirements which are directly applicable to the organisation;
- consulting and involving relevant government agencies;
- internally communicating relevant information regarding legal and other requirements;
- continually auditing, reviewing and upgrading company systems, management plans and supporting documentation; and
- providing relevant training.

2.1 Legal and Other Requirements

2.1.1 Acts and Regulations

The LEMP has been developed in consideration with the following key legislation:

2.1.1.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment 1979* (EP&A Act) and the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), provide the framework for development and environmental assessment in NSW. Part 3A of the EP&A Act provides for a category of development known as Major Projects. *State Environmental Planning Policy (Major Development) 2005* (SEPP Major Development) identifies categories of development which are considered to be Major Projects to which Part 3A of the EP&A Act applies.

On 1 March 2010, the Director General declared that the Bioreactor was a Major Project and was assessed under the provisions of Part 3A. An Environment Assessment (EA) considered the potential impacts of the expanded operations at the Bioreactor Woodlawn Expansions Projects.

On 16 March 2012, the DPE granted approval for the Bioreactor to increase its annual maximum input rate from 500,000 tonnes per annum (TPA) to 1,130,000 TPA to undertake expanded operations.

The conditions of the PA issued by DPE identify the measures that are required to:

- Prevent, minimise, and/or offset adverse environmental impacts including economic and socials impacts as a result of the expanded operations at the Bioreactor;
- Set standards and performance measures for acceptable environmental performance;
- Require regular monitoring and reporting; and

- Provide for the ongoing environmental management of the Bioreactor.

On 22 December 2017, modification under section 75W to DA-31-02-99 and PA 10_0012 was approved by DPE to allow the construction and operations of the Long Term Leachate Management Strategy

2.1.1.2 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) and associated Regulations relate to the management of pollution, licencing and waste disposal in NSW and is administered by the NSW Environment Protection Authority (EPA). Under section 48 of the POEO Act, premise based scheduled activities (as defined in Schedule 1 of the Act) require an Environment Protection Licence (EPL).

The Bioreactor is licensed as a waste facility that undertakes the premises based scheduled activity "waste disposal (application to land) to accept General Solid Waste (Putrescible). This classification, under Schedule 1 Part 3 of the POEO Act, is defined as "waste (other than special waste, hazardous waste, restricted solid waste, general solid waste (putrescible) or liquid waste)" and those materials which have been pre-classified as general solid waste (putrescible) by the EPA. The Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014) provides further guidance on waste types.

2.1.1.3 Waste Avoidance and Resource Recovery Act 2001

The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) is the result of a major overhaul of waste policy objectives and forms the basis of a framework for waste management in NSW. The WARR Act establishes a hierarchy to minimise the consumption of natural resources and final disposal of waste by encouraging waste avoidance, reuse and recycling.

The WARR Act promotes integrated waste and resource management planning, programs and service delivery on a statewide basis to ensure that waste is managed to reduce environmental harm in accordance with the principles of ecologically sustainable development and the objectives of the POEO Act.

As a regional putrescible waste landfill servicing Sydney and surrounding regions, the Bioreactor will continue to deliver disposal capacity and the superior environmental outcomes compared with conventional landfilling, whilst addressing capacity constraints.

2.1.1.4 Contaminated Land Management Act 1997

The principal object of the *Contaminated Land Management Act 1997* (CLM Act) is to establish a process for investigating and, where appropriate, remediating land that the EPA considers to be contaminated significantly enough to require regulation. Under the CLM Act, contamination of land is defined as:

'the presence in, on or under the land of a substance at a concentration above the concentration at which the substance is normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment''(CLM Act, s5).

Land may be considered contaminated even if it became contaminated partly, or entirely, by the migration of contaminants into, onto or under the land from other land.

The Bioreactor is considered contaminated land due to disturbance from former activities, however the operations undertaken at this site are appropriated managed with the ambient environmental conditions.

2.1.1.5 Water Management Act 2000

The *Water Management Act 2000* (WMA) aims to facilitate the sustainable and efficient use of water in such a way that benefits the environment and communities.

The WMA provides for the preparation of water management plans that outline arrangements for water sharing, water source protection and drainage management. As the Bioreactor lies partly in the Sydney Drinking Water Catchment, the operations on site need to be undertaken with the principles of the WMA to ensure a secure supply of water to meet the needs of Sydney, as well as protect the health of the catchment.

2.1.1.6 Environmental Planning Instruments

The following environmental planning instruments apply to the Bioreactor. Further details are provided in the EA.

- **State Environmental Planning Policy (Major Development) 2005:** In accordance with Schedule 1 of the Major Development SEPP, Group 9(27) "Resource recovery or waste facilities" the Bioreactor Project complies with the following criteria: *(1) Development for the purpose of regional putrescible landfills or an extension to a regional putrescible landfill that:(a) has a capacity to receive more than 75,000 tonnes per year of putrescible waste, or (b) has a capacity to receive more than 650,000 tonnes of putrescible waste over the life of the site.*
- **State Environmental Planning Policy 2007 (Infrastructure):** Development for the purpose of waste or resource management facilities is permitted with consent in a prescribed zone. *"Development" is taken to include the expansion of an existing facility.* The current zoning of the subject site is IN3 Heavy Industrial, which is one of the prescribed zones listed under Division 23.
- **State Environmental Planning Policy (Rural Lands) 2008:** Applicable to the Bioreactor, as it is sited within local government areas to which the SEPP applies for the protection of state and regionally significant rural lands from inappropriate land use changes, and the orderly and economic use and management of rural lands.
- **State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011:**

  The Leachate Treatment Plant do not alter the project's neutral or beneficial effect on water quality because:

  - The site will continue to operate as a zero contaminated water discharge site
  - No significant changes will be made to water flows, watercourses or riparian corridors

- Pollutant loads will continue to be effectively treated and disposed

The leachate treatment plant increase surface imperviousness and involve the storage of chemicals, however this is wholly contained within a bunded area. All soil disturbed as a result of the LTP (plant, pipelines, dams) is considered to be already disturbed and was managed through the Construction Environmental Management Plan and the Construction Soil Water & Leachate Management Plan

The leachate treatment plant have a positive impact on water quality by allowing Veolia to remove more leachate from the Bioreactor void, treat it to a high quality, and discharge it to an effectively designed and operated evaporation dam.

- **State Environmental Planning Policy 33 – Hazardous and Offensive Development (SEPP 33):** applies to development for the purpose of potentially hazardous and/or offensive industries. The Bioreactor constitutes a potentially hazardous and offensive industry as defined under clauses 3 and 4 of SEPP 33.
- **State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55):** Promotes the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. Under s.145A of the EP&A Act, contaminated land is defined as "*land in, on, or under which any substance is present at a concentration above the concentration at which the substance is normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment.*" The Bioreactor, hence, is considered a contaminated site but is suitable for the purpose of the operations being undertaken at the site.

2.1.2 Local Planning Controls

- **Goulburn Mulwaree Local Environmental Plan 2009:** The Goulburn Mulwaree Local Environmental Plan 2009 (Goulburn Mulwaree LEP) covers the land on which the Bioreactor is sited and zoned IN3 Heavy Industrial.
- **Goulburn Mulwaree Development Control Plan 2009:** Supports the Goulburn Mulwaree LEP and provide guidance for developments within the Goulburn Mulwaree Council Local Government Area (LGA). It also provides guidelines for managing Aboriginal and European heritage, landscaping, vegetation protection, dryland salinity, waterbody protection, groundwater, biodiversity, heavy vehicle generating developments, etc.

2.1.3 Relevant Planning Strategies

- **Sydney–Canberra Corridor Regional Strategy:** Applies to the local government areas of Wingecarribee, Goulburn Mulwaree, Upper Lachlan, Yass Valley, Palerang and Queanbeyan to accommodate and manage growth while ensuring that the rural landscapes and environmental settings of the Region are not compromised. It seeks to ensure that land is available and appropriately located to sustainably accommodate the projected population growth and associated housing, employment and environmental needs over the period until 2031. The Bioreactor facilitates the continued operation of a significant

industrial site in the Region that is an important local employment generator for the local population based in Tarago.

- **Goulburn-Mulwaree Strategy:** Establishes a framework for the future growth and development of the various settlements within the Council area up to 2020. A number of key principles underpin the Strategy, including the managed and sustainable growth of Tarago so that it retains its distinct rural, village like atmosphere. The Bioreactor provides for local economic development for the local population of Tarago as per the Sydney-Canberra Regional Strategy requirements.

2.1.4 Other Requirements (Licences and Permits)

The following environmental approvals are in place for the Bioreactor:

Table 2.1 Environmental Approvals

Description	Number
Conditions of Development Consent: The Woodlawn Waste Management Facility (issued by Department of Planning and Environment)	31-02-99
Notice of Modification MOD1	DA 31-02-99
Notice of Modification MOD 2	DA 31-02-99
Notice of Modification MOD 3	DA 31-02-99
Project Approval: Woodlawn Waste Expansion Project (issued by Department of Planning and Environment)	MP 10_0012
Notice of Modification MOD 1	MP 10_0012
Notice of Modification MOD 2	MP 10_0012
Environment Protection Licence (issued by Environment Protection Authority)	11436
Permit for the movement of solid waste from Sydney to Woodlawn Bioreactor for deep burial or composting for mine site rehabilitation on account of the pest Phylloxera (issued by Department of Primary Industries)	OUT13/13188
Special (Crown & Private Lands) Lease 20 (SML 20) (issued by Department of Primary Industries)	SML 20
Water Access Licence: Willeroo Borefield (issued by Water NSW)	

2.2 Management System

Veolia has developed and implemented a National Integrated Management System (NIMS) to assist in meeting the corporate objective of its waste operations through sustainable development. "Hippo Station" is the information and contractor management system or technology platform that houses NIMS documentation and information on contractors and "The Vault" is the system for reporting and managing incidents, recording audit and regulator enforcement information. The Vault is design to log all issues arising as a result of

- audit
- workplace inspection
- complaint
- risk assessment/hazard identification
- debrief
- change notification or
- casual observation.

Combined, the systems allow Veolia employees access to Veolia policies and processes. Veolia continually audit, review and upgrade company systems, management plans and supporting documentation to maintain business and best practice standards, as well as comply with relevant legislation. To achieve this, Veolia is maintain a program for independent third-party certification/ accreditation to the following standards:

Table 2.2 Certification

Description	Number
ISO 9001 Quality Management System	FS 603945
AS/NZS 4801 Work Health and Safety Management System	OHS 603946
ISO14001 Environmental Management System	EMS 603944

2.3 Environmental Policies

Veolia's business strategy is guided by five elements: our business, our customers, our people, our environment and our community. These elements shape all aspects of Veolia's future performance, and our corporate policies and practices are linked to delivering excellence in one or many of them.

Veolia has developed variety of company-wide policies in support of the sound management of its facilities. All policies have been endorsed by Veolia's Executive Committee and are reviewed periodically. All Veolia employees are required to commit to the implementation of these policies.

Veolia environmental policies support minimisation of emissions to land, air and water and the wise use of natural resources. This commitment is documented in Veolia's environmental and sustainability policies (refer Appendix B).

2.3.1 Environment Policy

Veolia is committed to minimising the environmental impacts of its operations and continually improving its environmental performance within a framework of sustainable development by:

- Effectively managing our significant environmental impacts, monitoring progress and reviewing environmental performance against objectives and targets on a regular basis.
- Driving continual improvement, and meeting the requirements of ISO 14001 environmental management systems standard as part of the integrated business management system.
- Complying with applicable environmental legislation, contractual and other necessary requirements related to our activities and assist customers and suppliers to use products and services in an environmentally sensitive way.
- Striving to ensure that our policies, objectives and achievements are communicated to all persons working for and on behalf of the business and to educate and train employees and ensure competence in environmental issues and the environmental effects of their activities.
- Preventing pollution and harm to the natural, heritage and built environments and to reduce the use of all raw materials, energy and supplies.
- Consulting with relevant stakeholders, taking into account local environmental conditions and working with local communities to achieve shared and lasting outcomes. All managers, employees, contractors and visitors are responsible for being aware of, and complying with this policy

Veolia's Environment Policy can be found at:
http://www.veolia.com.au/Content/Documents/sustainable-solutions/environment-policy.pdf

2.3.2 Sustainability Policy

For Veolia, sustainable development means adopting business strategies and activities that meet the needs of Veolia and its stakeholders today, while protecting, supporting and enhancing the human and natural resources that will be needed in the future. This outcome is expressed clearly in Veolia's Sustainability Policy:

- Being ethically responsible, to create value in what we do, and to use sound risk and hazard management principles in conducting our business. As part of its 'non-negotiables' Veolia will comply with all relevant legislation including pollution prevention and will strive to develop and improve our integrated business management system to support a consistent and disciplined approach to business processes. We will ensure that appropriate resources (both internally and externally) are utilised to assist in achieving our goals.
- Partnering in innovation and to understand and support our customers in achieving their business objectives.
- Attracting and retaining diverse and talented employees. This will include providing development opportunities so our employees are continually learning, communicating, providing workplace consultation, and creating an 'Always Safe' workplace, with an aspiration of no workplace injury or illness for our

employees, visitors and contractors. Continually designing and implementing sustainable solutions to develop access to resources and to protect and replenish them. Additionally, Veolia is committed to providing environmental leadership in its operations and solutions, which includes the management of its own environmental impacts, improving waste, water, energy and carbon outcomes, as well as protecting and conserving biodiversity and natural capital.

- Working closely with local communities to achieve shared and lasting outcomes. Additionally Veolia will engage with government, policy makers, advocacy groups, industry associations and other stakeholders in the areas which we operate to create better value and outcomes in sustainable practices.

Veolia's Sustainability Policy can be found at:
http://www.veolia.com.au/Content/Documents/sustainable-solutions/sustainability-policy.pdf

Section 3 Facility Overview

The Woodlawn Eco-precinct is located on 619 Collector Road, Tarago, approximately 10km southwest of the village of Tarago and 40km south of Goulburn, NSW. The current zoning of the site is IN3 Heavy Industrial within the Goulburn Mulwaree LEP.

The Bioreactor and with its associated waste operations comprise about 70 ha of the total 395 ha area lots of the site in which the Bioreactor is situated, made up of the following land titles:

- Lot 19, Deposited Plan (DP) 827588;
- Lots 25, 30, 88 and 91, DP 754919;

3.1 Site Setting

3.1.1 Geology and Hydrogeology

The Bioreactor lies in a regional geological setting of Middle to Late Silurian aged bedrock. These rocks form part of the Lower Palaeozoic succession in the Lachlan Fold Belt of south eastern NSW with the geological sequence including Lithifield Ordovician and Silvro-Devonian aged volcanogenic, volcanoclastic and sedimentary shales and sandstones. There are regional faults and joints. Dolerite intrusives outcrop extensively in the area north of the Bioreactor.

The hydrogeology of the Biorector and surrounding area is dominated largely by volcanic rocks within which the mineralised zone occurs. The rock mass is generally of low permeability but fractures and joints, where interconnected, create minor storage and some secondary permeability. The low bedrock surrounding the Bioreactor exhibits low bulk permeability due to the action of metamorphism and hydrothermal fluids which have effectively sealed the primary porosity of the bedrock.

It has been observed, with the exception of some seepage from the base of the Bioreactor, that most of the water enters the landfill Bioreactor (former mine) of the Bioreactor via old exploration drill holes, or the horizontal drain holes drilled to assist geotechnical stability. Secondary permeability potentially exists where the rocks have been sheared by faulting, or where the rock exhibits cooling fractures (dolerites). However, the secondary porosity has been largely sealed by clays formed during the weathering of the mineral compounds of the basement rocks.

Regional groundwater gradients pre-mining were not established but historical investigations have shown the regional water table to be a subdued reflection of surface topography with gradients away from the Great Dividing Range towards Crisps Creek and Lake George. Historical aquifer testing of the bedrock indicate low to extremely low values of transmissivity, with some of the monitoring bores taking a week or more to fully recover after purging of a single bore volume.

The Bioreactor is approximately 200 metres (m) deep and the total groundwater inflow into the Bioreactor is estimated to be approximately 1 litre per second (L/sec). This indicates that the Bioreactor is encapsulated within effective structural boundaries, which isolate it from the external hydrological environment. The majority of the inflows are from the upper half of the Bioreactor. Additionally, as water is flows into the Bioreactor, there is a low risk of leachate outflow into the surrounding system.

3.1.2 Topography and Drainage

The Bioreactor and the LTP site is located on top of a ridgeline that forms part of the Great Dividing Range, at an elevation of around 800 m in Australian Height Datum (AHD).

It lies in the headwaters of the Lake George and Wollondilly River catchment via Allianoyonyiga Creek to the west of the site, and the Mulwaree River catchment via Crisps Creek to the east of the site.

The Crisps Creek catchment is part of the Water NSW (formerly Sydney Catchment Authority) regulatory area. The watershed of the Wollondilly River/Lake George catchment also traverses the site. Lake George is located approximately 7.5km to the west and Lake Bathurst approximately 8.5 km to the northeast of the mine site.

Surface water runoff in the vicinity of the Biorector and LTP site is collected and diverted into detention ponds for evaporation, or diverted to natural drainage channels which flow in a north easterly direction towards Crisps Creek.

A number of water users exist within the catchment downstream of the Bioreactor site. Downstream water uses include stock (farm dams etc) and irrigation (agriculture). Within farms surrounding the Bioreactor site, surface water run-off is often retained in dams for stock water supply.

3.2 Facility Description

Operational since September 2004, the Bioreactor includes the landfill, which is located in a remnant, 30 million cubic metre, open-cut mine void, an extensive gas collection infrastructure, which captures and transfers the landfill gas produced to the onsite Power Station, where methane is extracted and combusted for generation of renewable energy.

In addition to the Bioreactor and the Power Station, the Bioreactor site contains the LTP waste rock dumps, tailings dams, evaporation dams, disused infrastructure and mine buildings. Access to the Bioreactor is off Collector Road, which runs in an east-west direction from its intersection with Bungendore Road.

Areas of the Bioreactor site include:

- The landfill void;
- Evaporation Dam 3 (ED3);
- The Leachate Treatment Plant;
- Evaporation Dam 1 Effluent dam; and
- Various facilities, northeast of the Bioreactor:
  - The Power Station;
  - Weighbridge;
  - Car park;
  - Access and haul roads;
  - Ablution and amenities facilities (including waste water management system);

- Administration buildings and laboratory building;
- Maintenance workshops; and equipment/parts storage shed
- Wheel wash

3.3 Operations Overview

The Bioreactor's and LTP operational hours are Monday to Saturday: 6am – 10 pm in accordance with the EPA.

The Bioreactor operations comprise waste filling with an input limit rate of 1,130,000 TPA, leachate recirculation/treatment and collection of landfill gas, energy generation and surface water management, detailed as follows:

3.3.1 Waste Filling

The Bioreactor is licensed to accept General Solid Waste (Putrescible) under EPL No 11436 encompassing:

- 900,000 TPA of putrescible, containerised waste received via rail from Sydney (from the BTT and the CTT);
- 130,000 TPA of putrescible waste received via road from areas regional to the Eco Precinct; and
- 100,000 TPA of residual waste from the MBT Facility.

In addition to this, the Bioreactor can also accept General Solid Waste (Putrescible), Asbestos Waste and Waste Tyres.

It should be noted that under the PA, waste receive locally is limited to 50,000 TPA until justifiable demand is satisfied.

3.3.1.1 Waste Acceptance

Waste is received at the Bioreactor, from Sydney via the IMF and locally, by waste delivery vehicles. Trucks are weighed at a weighbridge located at the entrance to the Bioreactor, along the site access road. Truck weights are recorded prior to the truck proceeding, and again upon exiting the site. Once weighed in, the waste vehicles proceed to the active tipping face within the Bioreactor, where operators direct drivers to tip.

Waste from Sydney, transported in shipping containers, which have been unloaded at the IMF, are loaded onto trailers specifically used between the IMF and the Bioreactor. These containers are unloaded in the Bioreactor via a Columbia Tipper, which is a dedicated equipment designed for tipping trailers.

3.3.1.2 Cover

Once deposited in the Bioreactor, the waste is spread and covered with a 150 mm layer of soil (or an approved alternative cover material), at the end of daily operations, as per the PA and EPL requirements.

A stockpile of cover material sufficient to meet requirements to cover exposed waste surfaces that are likely to arise over a 2 week period of work will be available at the Bioreactor under all weather conditions.

3.3.2 Bioreactor Design

Designed to decompose putrescible waste at a faster rate than traditional landfills, the Bioreactor achieves this through the recirculation of leachate to increase the moisture conditions, the benefits of which increase the rate of waste degradation and stabilisation, improves settlement rates and improves landfill gas generation. A barrier system has been constructed at the base of the Bioreactor to enable the collection and recirculation of leachate. This system includes a underdrain for collection of groundwater beneath the bioreactor, a 900mm compacted clay liner with a permeability of less than 10-9 m/s, and a 300mm gravel drainage layer. Leachate recirculation and gas extraction system are progressively installed throughout the Bioreactor as waste filling occurs.

3.3.3 Leachate Treatment

Veolia has been operating an activated sludge leachate treatment system in the Leachate Treatment Dam (LTD) since 2012. This system has been consistently improved in terms of process reliability and treatment efficiency since commissioning. While the quality of the treated leachate has steadily improved since 2012, the treatment capacity of the system is still influenced by ambient conditions, which affects the required residence time within the leachate Treatment dam.

The Leachate Treatment Plant consists of several wastewater treatment elements for treating leachate from the void to a much higher quality effluent than the LTD. The treatment consists of biological process (activated sludge/biomass) involving chemical addition and removal of potential odour producing compounds.

3.3.4 Energy Generation

Landfill gas collected from the Bioreactor is transported to the Power Station, where methane is extracted for conversion and supply as electricity into the energy grid. The Power Station has been exporting energy to the electricity grid since 2007 and is currently at 7.4 megawatt (MW) capacity. It is proposed that a maximum of 24 MW capacity will be achieved by the Bioreactor. Power infrastructure at the Bioreactor comprises:

- 66/11 kilovolt (kV) zone substation and 11kV switching stations – Operated by Essential Energy;
- Three 750KVA pad mount distributing substation;
- 11kV circuit breakers;
- transformers;
- high and low voltage power lines and poles; and
- standby generators

Power transfer is provided via two high voltage networks to load centres across the site: one provides power to the Bioreactor; the other provides power to the rest of the Bioreactor site. Load centres distribute power to infrastructure requirements such as pumps and power outlets. All operation and maintenance on high voltage infrastructure is performed by Essential Energy.

High voltage is converted at the pad mount substation to low voltage power for site facilities, flare operation, auxiliary equipment at the Power Station. A standby generator is available to provide backup low voltage power when required.

Exported power from the generators is distributed via a high voltage cable to the Essential Energy 66/11kV Substation. Electricity is converted from the landfill gas generators through a series of transformers within the power station and finally converted to 66kV within the Essential Energy substation, where the power is exported into the electrical grid.

3.3.5 Surface Water Management

Surface water management will be undertaken in accordance with the strategies presented in the Soil and Water Management Plan (refer Appendix D2)

3.3.6 General Considerations

3.3.6.1 Access Controls

The site displays signage to advise that it is a private site, not for public use. Additional signage includes:

- Details of the types of waste accepted at the site
- Directional and speed limit signs for vehicles,
- Adequate signage to satisfy work health and safety requirements

Security is maintained by a 1.8m high chain-link fence around the Bioreactor and all gates are locked outside of normal operating hours. Fences are inspected routinely for signs of damage and/or intruder entry.

3.3.6.2 Plant and Equipment Maintenance

All plant and equipment installed or used in or on the Bioreactor and LTP are to be maintained in a proper and efficient condition and operated in a proper and efficient manner in accordance with PA and EPL requirements. This includes all drainage systems, infrastructure and pollution control equipment. The NSW Woodlawn and IMF Plant Maintenance Procedure (PRO-NSW-218-055) outline maintenance instructions.

An asset management strategy to maintain the integrity of all infrastructures forming the LTP will be developed. Maintenance activities will include preventative, predictive and corrective maintenance.

A computerised maintenance management system (CMMS) will be used to plan and record maintenance activities.

Maintenance for LTP is described in more detail in the initial maintenance schedule (Apppendix E)

3.3.6.3 Fire Prevention

Immediately upon becoming aware of a fire at the site, all necessary measures to extinguish the fire will be taken. There will be no incineration or burning of any waste at the Bioreactor in accordance with EPL requirements.

Adequate fire prevention measures have been put in place, and all personnel are able to access fire-fighting equipment and manage fire outbreaks at any part of the Bioreactor in accordance with the guidance provided in the Fire and Emergency Management Plan, appended to this LEMP (refer Appendix D6).

3.3.6.4 Dangerous Goods Storage

All fuels or flammable solvents for operational use will be stored in an appropriately ventilated and secure store in accordance with the PA and EPL requirements. The procedure Veolia Chemical and Hazardous Materials Management (PRO-123-1) provides guidance on storage of such substances on Veolia sites. This storage is located on unfilled land, and all flammable liquids stored within a bund of 110% capacity of the volume of those flammable liquids so that any release of raw or burning fuel do not cause a fire in the filled waste or impact on surface water. The NSW Woodlawn Bioreactor Hazardous Substances and Dangerous Goods Register (TEM-18-1) records such chemicals used on site.

3.3.6.5 Litter Control

Litter control for the Bioreactor will be carried out in accordance with VES Housekeeping and Inspection Procedure (PRO-257-1) which provides guidance on litter management on Veolia sites. At the Bioreactor, this includes the use of litter fences, and ensuring that all wind-blown litter that leaves the site is retrieved.

All litter fences, perimeter fences and gates will be inspected daily and cleared of litter as required. Entry and exit signs need to advise transport operators that they can be fined for any litter on public roads resulting from their improper transport of waste.

3.4 Operational Environmental Impacts

Accordingly, operational activities and consultation with key stakeholders, both regulators and the community, highlight the following environmental impacts as considered crucial in defining the level of environmental risk associated with the Bioreactor in its expanded operations stage.

- Air quality (odour and dust) related issues;
- Greenhouse gas impacts;
- Surface and groundwater impacts;
- Noise related impacts; and
- Pest, disease and agriculture related impacts (including flora and fauna)

The identification and prioritisation of such environmental issues take into account the following:

- The planning and legislative requirements affecting the Bioreactor;
- The environmental context of the Bioreactor area and the region;
- The outcomes of the community and stakeholder consultation;
- A review of previous investigations undertaken for the Bioreactor site;
- Existing operational and management plans used by Veolia; and
- The findings of the specialist environmental studies undertaken for EA.

In addition to the above environmental issues emphasised, the following are also considered potential impacts and risk assessed accordingly.

- Traffic and transport related impacts;
- Socio economic impacts (including visual amenity);
- Impacts associated with hazards arising from the operation and expansion of the facility;

3.4.1 Environmental Risk Assessment

On the basis of the potential environmental impacts highlighted above and a thorough review of the environmental management practices at the Bioreactor and LTP, a risk assessment was undertaken as part of the EA to reflect the expanded operations and LTP operations (refer Table 3.1). Given that the site operates under existing approvals issued by the DPE and the EPA, suitable environmental controls have already been implemented and continue to be assessed.

Table 3.1 Potential Environmental Impacts

Issue	Environmental Risk	Likelihood of Occurrence	Reference
Air quality (dust and odour)	Emission of air pollutants and odour above the DECCW guidelines.	Low level of risk due to the large buffer distance between the Bioreactor and sensitive receptors.	PA Schedule 4, Conditions 4 – 12 Air Quality and Greenhouse Gas Management Plan (Appendix D1)
Greenhouse gas emissions and energy use	Excessive energy consumption and related GHG emissions compared to similar facilities.	Known consequences with significant offset through generation of electricity from methane produced at the site.	
Surface Water	Contamination of surface water.	Possible without control measures, but unlikely due to existing approved Surface Water Management Scheme.	Conditions 13 – 18 Soil and Water Management Plan (Appendix D2) and Leachate Management Plan (Appendix D3)
Groundwater	Contamination of ground water.	Possible without control measures, however unlikely due to the use of leachate barrier systems and existing Groundwater Management Scheme.	
Noise	Increased noise impacts above the EPA guidelines. Impacts on local residents.	Rare due to the large buffer distance between the Bioreactor sensitive receivers.	Conditions 19 – 22 Noise Monitoring and Management Plan (Appendix D4)

Issue	Environmental Risk	Likelihood of Occurrence	Reference
Pest, disease and agriculture related impacts	Introduction of pests and the spreading of disease as a result of the proposed expansion.	Possible without control measures, however unlikely due to existing approved, operational management measures.	Conditions 23 – 24 LEMP Section 3.4.2.5 Landscape and Vegetation Management Plan (Appendix D5)
Traffic and transport	Significant impacts on local Tarago community, impacting levels of service and traffic flow.	Rare due to the relatively low level of truck movements.	PA Schedule 6, Conditions 1 – 11 LEMP Section 3.4.2.6
Socio economic	Negative impact on existing social conditions and on economic vitality of the Tarago district.	Rare as the Project will generate additional employment demand, while amenity impacts are low.	LEMP Section 3.4.2.6
Hazard and risk	Increased risk to human health and the environment from expansion, especially from dangerous materials and gases.	Rare as hazardous substances may not received at the Bioreactor.	LEMP Section 4.4.1
Cumulative impacts	Possible cumulative impacts include noise, air quality and odour, surface water, groundwater, and traffic.	Possible without adequate control measures and management techniques.	Each supplementary plan (Appendix D)

3.4.2 Key Environmental Issues

The following key environmental issues identified via the risk rating were were modelled to obtain predicted impacts, which have been detailed in supplementary Environmental Management Plans (EMPs) appended to this LEMP (refer Appendix D), along with the identified mitigation measures.

3.4.2.1 Air Quality

A comprehensive air quality (dust and odour) and greenhouse gas impact assessment was undertaken for the Bioreactor expanded operations to determine the potential impacts of dust, suspended particulate matter, odour and greenhouse gas emissions.

The air quality modelling predicted that the expanded operations would not likely have any adverse impacts in terms of particulate matter or odour or at any of the receptor locations.

- **Dust/Particulate Matter**

  Background Depositional Dust (DD) monitoring has been conducted at the Woodlawn site at a number of locations since prior to commencement of operations in 2004. The DD results are significantly below the adopted background level with a predicted result of incremental increases of less than 0.07 g/m^2/month at all receptors.

  Cumulative particulate matter (PM) emissions associated with the expansion project were not predicted to result in exceedance of the adopted criteria for the Bioreactor. PM less than 10 micrometres (PM_{10}) concentrations were predicted to be less than 13 µg/m^3 as a 24-hour maximum and 0.7 µg/m^3 as an annual average at all receptors. Total suspended particulate concentrations were predicted to be less than 0.3 µg/m^3 as an annual average at all modelled receptors.

  Further details of the dust assessment and the mitigation strategies are provided in the Air Quality and Greenhouse gas Management Plan (Appendix D1)

- **Odour**

  Atmospheric dispersion modelling of odour indicated that at all surrounding residences, odour were predicted to be at concentrations less than 4.1 odour units (OU) as a 99th percentile, 1-second average. The specific odour performance goal was for the Bioreactor was adopted as 6 OU. The site showed no increase in odour impact at surrounding receptors resulting from the increase in the surface area of waste.

  A worst-case scenario was been modelled, with all liquid storage areas modelled at capacity and with an active waste tipping area of 2 ha. In reality, leachate (treated and untreated) storage areas are unlikely to be at levels approaching capacity as leachate is used on the waste to enhance degradation of fresh waste. Excessive storage is unlikely and an active waste tipping face of the modelled size should not be required in reality.

  Based upon the results of this modelling assessment, it is not considered that the expanded operation is likely to lead to an exceedance of the odour performance goal.

  Veolia engaged The Odour Unit to undertaken an odour modelling assessment for the LTP .The purpose of the assessment was to determine the potential odour impact through continuous treatment of leachate through the MBR facility and storage in ED1.The results of the odour indicated that :

  - The modelling projection results demonstrate compliance with the 6 ou odour performance criteria ground level concentration based on 1-hour averaging at the 99.0th percentile frequency at the nearest sensitive receptor
  - There is minimal sensitivity to variations in leachate quality of 2, 5 and 10 times above the target design treated leachate quality parameters.
  - Veolia is targeting a high quality treated leachate effluent for storage in ED1.

- Veolia's long-term leachate treatment solution (MBR treatment plant option) will not result in any significant increase to off-site odour impacts and will have negligible change on the existing surrounding off-site amenity

Further details of the odour assessment and the mitigation strategies are provided in the Air Quality and Greenhouse Gas Management Plan (Appendix D1)

3.4.2.2 Greenhouse Gas

A greenhouse gas (GHG) assessment was carried out which quantitatively estimated the emissions impact directly associated with the Bioreactor expanded operations, as well as other indirect, wider GHG impacts

The total GHG emissions for the Bioreactor is estimated to be 244 kilo tonnes of carbon dioxide equivalent (ktCO2-e), which represents 98% of the total estimated emission of 249 ktCO2-e for the Bioreactor . The fugitive emission of methane from the waste represents approximately 92% of the total estimated emission, while indirect emissions only represent approximately 0.7% of total estimated emissions from the Project. The carbon intensity of the Woodlawn Expansion Project is estimated to be 0.22 ktCO2-e/kt MSW (based upon 249 ktCO2-e/1130 kt MSW).

Despite the emissions associated with the Bioreactor expanded operations, the total GHG impacts are largely offset by the electricity generated on site at the Power Station. It was estimated that an additional 210,240 MWh of renewable electricity would likely to be generated as a result of the expanded operations, representing a GHG offset of approximately 166,347 t CO2-e (replacing electricity generated from fossil fuels). At full capacity the Woodlawn Eco-Precinct, including the Bioreactor and the wind farm, is expected to generate almost 300,000 MWh per year, and provide power for the equivalent of approximately 37,500 homes a year.

A GHG assessment for the leachate treatment plant found that emissions would be negligible with an estimated 420 kg CO2-emissions per year representing less than 0.0000003% of NSW' annual emission rate.

Further details for the GHG assessment and the mitigation strategies are provided in the Air Quality and Greenhouse Gas Management Plan (Appendix D1)

3.4.2.3 Soil and Water

Soil

The soils and geology of the Bioreactor site are not expected to be affected given that there are no significant excavations or construction activities generated by the expanded operations with the exception of the installation of new lighting towers into the Bioreactor to facilitate night time operations. Additionally, any existing erosion and sedimentation control measures will continue to be maintained.

The soils and geology of the LTP site is not expected to be affected by given that no groundwater disturbance or contamination is anticipated during the construction works. If any contamination is detected, the management practices detailed in the Construction Site Contamination Management Plan (CSCMP), appended to the

Construction Environmental Management Plan (CEMP).Additionally, any existing erosion and sedimentation control measures will continue to be maintained.

Further details for the soil assessment and the mitigation strategies are provided in the Soil and Water Management Plan (refer Appendix D2)

Water

The assessment of the surface water storages and groundwater system surrounding the Bioreactor indicated that potential impacts from increasing the maximum input rate at the Bioreactor to 1.13 million tpa would be negligible.

Further details of the surface water and groundwater assessment and the mitigation strategies are provided in the Soil and Water Management Plan (refer Appendix D2)

Leachate

The movement and management of leachate has been assessed. Potential impacts from leachate production at the Bioreactor as a result of the expanded operations were considered negligible for the following reasons:

- the change in the maximum input rate will not result in a change in the configuration of the final leachate profile post-closure;
- the potential for seepage of leachate is very low;
- modelling results indicate that impacts on the Crisps Creek catchment would be negligible; and
- Modelling results indicate conclusively that contaminants would not migrate from the Bioreactor to the regional groundwater system at Crisps Creek over the 50-year time frame required for leachate to establish a benign state.

Further details of the leachate assessment and the mitigation strategies are provided in the Leachate Management Plan (refer Appendix D3).

3.4.2.4 Noise

A comprehensive noise impact assessment for the expanded operations was undertaken. The existing noise levels within the Bioreactor area and surrounds were used to determine the noise impact criteria and predict noise levels expected to result from the expanded operations. The assessment identified that operational noise levels generated the Bioreactor would likely meet the relevant noise criteria at the nearest receivers.

A Qualitative assessment for the LTP, which considered the noise emissions from the blower at 1 metre from the source, against the noise levels in the approval, found that the LTP would not generate excessive noise and would comfortably meet the established limits at sensitive receivers. In fact the assessment predicted that the leachate treatment plant would be inaudible at the nearest sensitive receptor.

Further details for the noise assessment and the mitigation strategies are provided in the Noise Monitoring and Management Plan (Appendix D4).

3.4.2.5 Pest, disease and agriculture related impacts

The introduction of pests and the spreading of disease, as a result of expanded operations can be considered possible, however control measures such as the screening and acceptance of waste in line with EPL requirements is well implemented. Veolia also holds a permit for the movement of solid waste, excluding agricultural or horticultural waste, from the Sydney Metropolitan Phylloxera Infested Zone into the Bioreactor within the NSW Phylloxera Exclusion Zone for deep burial (OUT 13/13188) issued by the Department of Primary Industries.

In addition, a pest and weed management plan forms part of the Landscape and Vegetation Management Plan (LVMP), which outlines the measures to manage pests, vermin and declared noxious weeds on site. This plan covers the Bioreactor, the IMF and the transport route between the 2 facilities. The LVMP is appended to this LEMP (refer Appendix D5).

The LVMP also has been prepare to include the measures to minimise the vegetation loss and additional tree planting to offset the loss. As a part of the ongoing, maintenance regime for the rehabilitation and vegetation management plan on the site the contract document, there is an agreement in place with subcontractors (South – East Local Land Services) to:

- Protect and improve the condition of native riparian vegetation through fencing
- Increase the extent of native riparian vegetation and native habitat
- Enhance native vegetation condition through bush regeneration and weed control activities to reduce the impact of weeds and encourage natural regeneration of native plants
- Protect and improve the condition of native terrestrial vegetation through fencing.

3.4.2.6 Other Environmental Considerations

- **Traffic and Transport Impacts**

A transport impact assessment undertaken as part of the EA noted that no additional access arrangements, road infrastructure or car parking provisions was required for Bioreactor as part of the expanded operations.

While impacts on the local Tarago community due to levels of service and traffic flow in the vicinity of the IMF and the Bioreactor were consider, the risk is rare due to the relatively low level of truck movements. .

Traffic generation during LTP operation is limited to approximately 10 deliveries per month, being:

- 1 B-double truck delivering methanol every 10-20 days
- 1 B-double truck delivering sodium hydroxide every 10 days
- 1 truck for the 1000L IBC every month
- 1 truck per week to remove dewatered sludge

These truck movements will be managed through the approved Traffic Code of Conduct for the project.

In addition, the use of long-haul rail transport as an alternative to road freight offers a significantly more fuel-efficient alternative contributing a major greenhouse benefit, as rail transport would result in three times less emissions than road transport. Avoiding long-haul road freight has generated amenity benefits for the local community reducing traffic, noise and air quality impacts.

- **Socio Economic Impacts**

Overall, the expanded operations at the Bioreactor results in both identified potential impacts such as odour, noise and traffic issues and benefits such as employment and Veolia's contributions to the community. Veolia has well established mechanisms in place for addressing community concerns for engaging with the community to assist in the management of issues raised (refer Section 4 of this LEMP). In addition, amenity impacts such as lighting on site is screened and directed in such a way that it does not create a nuisance to surrounding properties or the public road network. Furthermore, no waste processing activities are visible from the public road network or local residential properties.

Section 4 Implementation of the LEMP

4.1 Structure, Roles and Responsibility

Figure 4.1 indicates the staffing and organisational structure for the operation of the Bioreactor and LTP, which will be amended from time to time as required. Veolia Water division with ongoing support from the Bioreactor team will oversee LTP operations.

4.1.1 Roles and Responsibilities

All Bioreactor and LTP staff will be made aware of the manner in which the site is to be operated and managed, to ensure compliance with this LEMP. A summary of the authorities and environmental responsibilities of key personnel for the operation of the Bioreactor is outlined below:

4.1.1.1 Woodlawn Eco-precinct Manager

- Ensure that the site complies with the site relevant licence , acts and regulations
- Approve and implement the LEMP;
- Appoint/nominate the Environmental Management Representative (EMR);
- Allocate project resources to handle environmental issues;
- Take action to resolve major non-conformances and notify the site' Safety Health Environment Quality (SHEQ) Officer or NSW Environment Officer;
- Authorise and confirm the implementation of mitigation measures
- Ensure suppliers and subcontractors comply with requirements;
- Review the LEMP and associated documentation, as required;
- Provide support to the site to ensure they are aware of their environmental obligations and enable them to meet their environmental commitments;
- Ensure that site personnel receive appropriate environmental awareness training;
- Report to senior management on the performance of the system, environmental issues/breaches etc. and improvement opportunities;

4.1.1.2 Environmental Officer (Woodlawn)

- Making sure that the site comply with the site relevant licence , acts and regulations;
- Undertake and/or co-ordinate environmental monitoring requirements of the EPL;
- Ensure that environmental records and files are maintained;
- Identify non-conformances and notify the Woodlawn Facilities Manager/ Safety Health Environment Quality (SHEQ) Representative/ NSW Environment Officer;
- Ensure that environmental non-conformances are recorded and actioned;
- Review and updates the LEMP and associated documentation, as required;
- Prepare environmental performance reports;

- Deliver environmental awareness training; and
- Collate and maintain records of complaints, respond to complainant

4.1.1.3 LTP Supervisor

- To operate and maintain the LTP in conjunction with Bioreactor operations team;
- To maintain, optimize and plan the maintenance strategy utilizing the Veolia Asset Management System(VAMS);
- Generate Maintenance Reports;
- To advise on the plant performance on monthly basis;
- To maintain an accurate asset list of all the individual items in VAMS relating to LTP.

4.1.1.4 Safety Health Environment Quality (SHEQ) Representative/ NSW Environment Officer

- Ensure that the site complies with the site relevant licence , acts and regulations;
- Liaising with regulators on behalf of the site;
- Assist with environmental incident investigations;
- Audit environmental records;
- Review the LEMP and associated documentation, as required;
- Review environmental performance reports;
- Develop and deliver environmental training; and
- Provide technical advice as required.

4.1.1.5 Subcontractors

- Comply with all legal and contractual requirements;
- Comply with management / supervisory directions; and
- Participate in induction and training as directed.

4.1.1.6 All Personnel

- Comply with the relevant Acts, Regulations and Standards;
- Comply with Veolia policies and procedures;
- Promptly report to management on any non-conformances and/or breaches of the system; and
- Undergo induction and training in environmental awareness as directed by management.

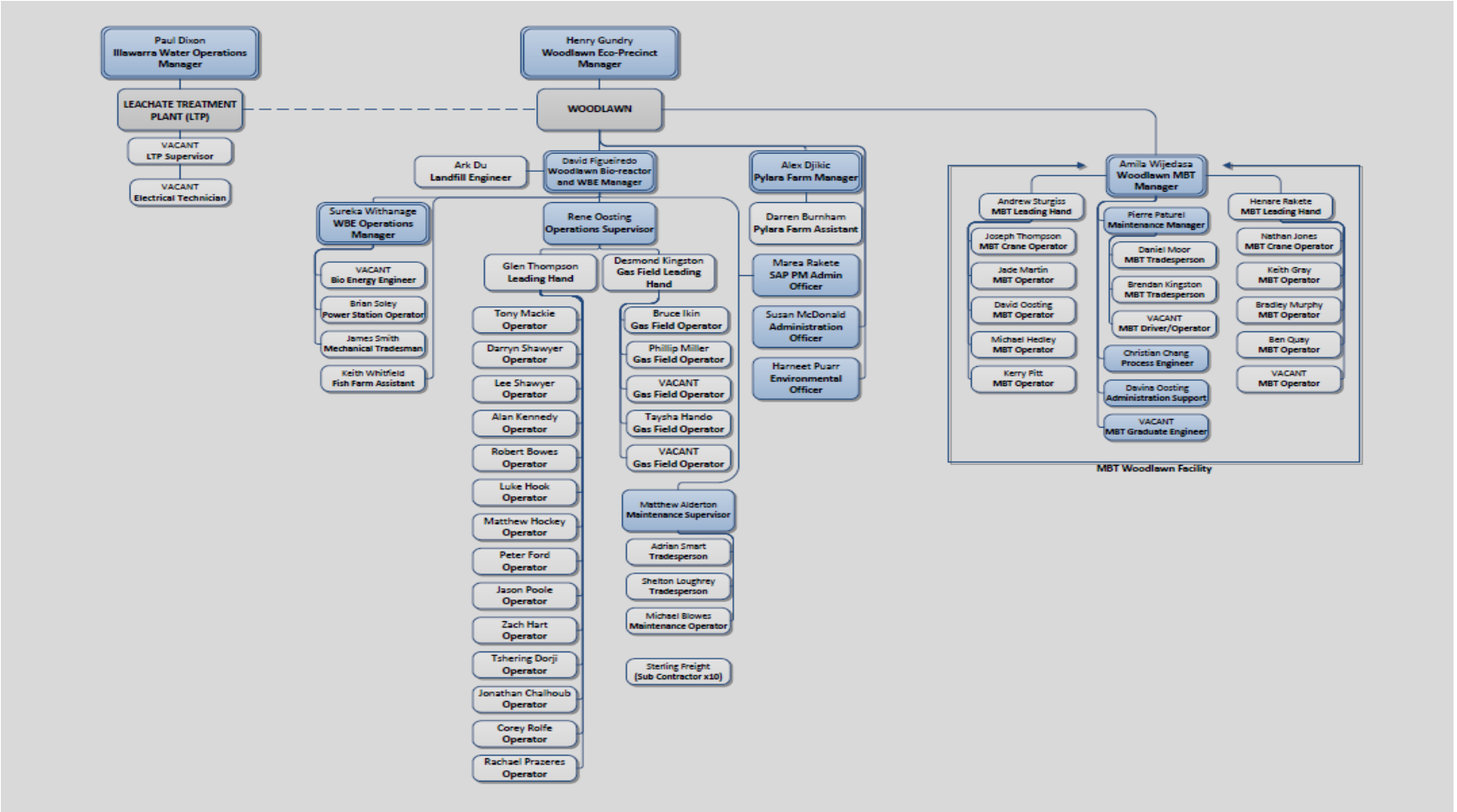


Figure 4.1 Woodlawn Bioreactor Organisational Chart

4.2 Training

All Bioreactor and LTP employees (and subcontractors, where required) receive suitable environmental training, to ensure they are aware of their responsibilities and are competent to carry out their work.

Environmental requirements are explained to employees as part of Veolia corporate inductions and refreshers and national sustainability awareness training. In addition, during site inductions and on an ongoing basis, training will be provided in meetings and alike. All inductions and ongoing training shall be recorded.

All employees (including subcontractors, as relevant) receive induction/training in the following areas:

- Veolia environmental and sustainability policy;
- LEMP and related documents;
- Bioreactor environmental objectives and targets;
- Understanding individual authorities and responsibilities;
- Significant risks, environmental aspects, impacts and controls;
- Potential consequences of departure from procedures;
- Emergency procedure and response; and
- Understanding their legal obligations.

Personnel performing tasks that can cause significant environmental impacts shall be competent on the basis of appropriate education, training and/or experience.

In addition to routine environmental awareness, the minimum requirements for training exercises pertaining to incidents and emergencies are provided in the Fire and Emergency Management Plan (refer Appendix D6).

All Bioreactor employees will be trained in response procedures which will include potential impacts of operational failures and environmental incidents. The training will include theoretical sessions and practical emergency scenarios.

Depending on the type of scenario, the simulation may be run as a simple desktop exercise, practical exercise involving Bioreactor staff or broad exercise involving emergency services (when deemed necessary).

All scenarios will be followed by a formal debrief session. Any issues/actions raised will be managed via The Vault.

4.3 Communication and Consultation

Veolia is committed to meaningful stakeholder engagement and has worked in collaboration with relevant government agencies and the local community in the township of Tarago since the commencement of operations of the Bioreactor to resolve issues that impact local environmental amenity, as a result of operations at the Bioreactor.

4.3.1 Government Agencies

The following government agencies have been consulted with in relation to the expanded operations of the Bioreactor and the requirements of this LEMP:

- NSW Department of Planning and Environment;
- NSW Environment Protection Authority;
- Water NSW
- Goulburn Mulwaree Council
- Palerang Council

4.3.2 Community Consultation

Veolia aim to ensure that the local community is kept informed of the progress of the project in a pro-active and responsive manner. This is undertaken by way of local newsletters, leaflets, newspaper advertisements, and community notice boards as appropriate, to include notices such as:

- Hours of operation.
- Contact telephone number.
- Major changes to the programme of operations and work required outside the normal working hours; and
- Any major works proposed which may impact the community;

The key objectives of the community focused communication and consultation program include:

- Educating stakeholders regarding key aspects of the Bioreactor; and
- Informing community groups and neighbours to help Veolia understand concerns.

Community consultation activities include:

- A dedicated Veolia webpage, offering general information on the Bioreactor (refer section 4.3.3);
- A community telephone line to provide a central point of contact for community enquiries(refer section 4.3.3);
- Proving sponsorship and a regular column in the local newspaper, The Tarago Times, which is non-profit community service, published monthly by the Tarago Sporting Association Inc. It is distributed throughout Tarago, Lake Bathurst, Mayfield, Boro, Taylors Creek and the surrounding district.Veolia keeps the residents informed of the activities within the Eco Precinct site via this medium and promotes the feedback telephone line.
- Active participation in the Tarago Progress Association Inc (TADPAI), which is a community group aimed at promoting the district and assisting the community in the development and maintenance of a rural lifestyle.

4.3.2.1 Community Liaison Committee

Veolia formed a Community Liaison Committee (CLC) in 2004, which acts as an open forum to interface between the residents of Tarago and Veolia to proactively resolve issues that impact on local amenity potentially from operations at the Bioreactor.

The CLC is made up of representatives from Veolia, the local community and Goulburn Mulwaree Council. The CLC's meeting schedule is on a quarterly basis and its minutes are available to members of the public.

The Woodlawn Facilities Manager ensures that the minutes from the CLC meetings and results and interpretation of monitoring required by regulations are accessible to the public, as required.

4.3.2.2 Veolia Mulwaree Trust

In addition to the community consultative activities, Veolia with the local community's cooperation established the Veolia Mulwaree Trust in 2003. The objective of the Veolia Mulwaree Trust (which includes 1 Veolia company representative together with 3 independent members with strong standing in the local community) is to provide funding to any charitable purpose and/or projects for the benefit of the community associated with the former Mulwaree Shire Council area.

The Veolia Mulwaree Trust has supported numerous organisations through its grants and donations since 2005, including distribution of some $10 million. A web site (http://mulwareetrust.org.au/) has also been established to provide information about the Veolia Mulwaree Trust's Community Grants Program.

4.3.3 Information Availability

The following avenues provide availability of information about the Bioreactor:

- Dedicated Veolia webpage:
- http://www.veolia.com.au/sustainable-solutions/community-development/woodlawn-bioreactor
- Community telephone line:

Table 4.1

Location	Contact
Woodlawn 24 hour feedback line	1800 241 750
Woodlawn Bioreactor Reception	(02) 8588 1360
Clyde Transfer Terminal (24 hours)	(02) 8868 7400

- Pollution Incident Reponse Management Plan (inaccordance with EPL requirements):
- http://www.veolia.com.au/sustainable-solutions/environmental-compliance
- Published monitoring data:
- http://www.veolia.com.au/sustainable-solutions/environmental-compliance/nsw-environmental-monitoring-data

In accordance with the PA, the following information will be made available on the webpage:

- a copy of all current statutory approvals;
- a copy of the Environmental Management Plan required under this approval;
- a copy of any Annual Environmental Management Report including monitoring results (over the last 5 years);

- a copy of any Independent Environmental or Odour Audit and Veolia's response to the recommendations in any audit; and
- any other matter required by the DPE.

In addition to the above, Veolia has established a purpose built visitor education centres at the Bioreactor. Veolia clients, local council staff, government employees, elected representatives, interested groups and community members are welcome to attend tours of the facility.

4.3.4 Complaints Handling

Close liaison is maintained between residences near the Bioreactor site to provide effective feedback in regard to perceived emissions.

In this manner, operations can be co-ordinated where necessary to minimise disturbance to neighbouring residents, and to ensure prompt response to complaints, should they occur.

The telephone feedback line can be used for receiving public comments, including complaints and is published locally in the press or by other suitable means so that impacted community knows how to contact Veolia.

In addition, Veolia supplies and monitors odour diaries for logging by selected local residents who form part of the TADPAI, particularly for managing potential odour offences.

An odour rating scale which was developed by The Odour Unit (TOU), a consultant engaged by Veolia to undertaken odour monitoring at the Bioreactor, is used by the residents to describe any offensive odour detected and report to the site.

Complaints or adverse reports received from any external source shall be recorded and the Woodlawn Facilities Manager and/or Environmental Officer (Woodlawn) shall be notified of all public complaints. Records of any complaints will be kept for at least four years after the complaint was made.

All public complaints received (either written or verbal) will be documented to contain the following information:

- Nature and extent of the complaint;
- Method by which the complaint was made;
- Name and address of the person lodging the complaint;
- Details of all related factors including location, dates, frequency, duration, site conditions and effects of the complaint; and
- Action taken to address the complaint including follow up contact with the complainant.

The Woodlawn Facilities Manager and/or Environmental Officer (Woodlawn) or nominee will record the details of all complaints received in an up-to-date log-book to ensure that a response is provided to the complainant within 24 hours or as soon as practicable.

The Facility Manager, or their nominee, shall investigate and determine appropriate corrective/preventive actions to be taken to address all complaints. The complainant will be informed in writing the results of the investigation and action to be taken to

rectify or address the matter(s). Where no action is taken the reasons why are to be recorded.

The corrective action may involve supplementary monitoring to identify the source of the non-conformance, and/or may involve modification of operational techniques to avoid any recurrence or minimise its adverse effects.

The Woodlawn Facilities Manager or nominee will make available a report on complaints received to the CLC and relevant parties upon request.

The Facilities Manager will establish and maintain procedures for the collection, indexing, filing, storage and maintenance of site records. Archived records will be kept in accordance with Veolia's document control procedures.

4.4 Incident and Emergency Response

Veolia operates the Bioreactor where a major incident, emergency or crisis could lead to public health, safety or environmental issues. A key objective of this LEMP is to identify potential risks, develop, and maintain measures to manage them.

Veolia's approach to incident and emergency response management includes:

- Risk Analysis - The identification of hazards and risks that could impact the community, environmental and operational implications.
- Prevention – The planning and documentation of prevention and mitigation activities for all major hazards, and allocation of responsibility for their implementation.
- Preparedness – The development, implementation and review of specific incident management plans and processes to manage identified risks, the training of staff, and establishment of facilities to ensure the company can respond effectively to an incident.
- Response – The issue of warnings and establishment of processes for effective notification of incidents, and mobilisation of resources to combat the incident or threat.
- Recovery – The return to normal operations, management of debriefs, and implementation of lessons learnt from the response process.

The following priorities are adopted when combating an incident / crisis:

- Protection of human life and welfare;
- Protection of the environment; and
- Protection of Veolia's assets.

Potential threats to the environment or public health that may arise in relation to the operation of the Bioreactor (as presented in Section 3.4.2) include:

- Fire;
- Explosion;
- Overflow / spillage;
- Dam failure or other structural damage;
- Power or other utility failure;
- Natural disaster;

- Surface water and groundwater contamination;
- Traffic accident; and
- Geotechnical instability

4.4.1 Hazard and Risk

Consideration of risk to human health and the environment from the expanded operations and LTP were carried out in the form of a hazard analysis, with the main hazards associated with fire, explosion (predominantly due to the potential ignition of methane gas) and general safety hazards). The risk screening indicate that the site is not consider potentially hazardous, and as no additional hazards would be introduced, no further quantification of risks were required. The qualitative assessment for offsite and onsite impacts are provide in Table 4.2 below.

All know hazards are understood and managed by Veolia with any incidents dealt with as part of the Fire and Emergency Response Plan appended to this LEMP.

Table 4.2 Hazards and Risk

Hazard	Description	Safeguards	Risk Assessment
Offsite Risk			
Fires and Explosion On-Site	Landfill gases are generated through decomposition of the waste mass including flammable methane. This can ignite in presence of oxygen and an ignition source. Also a risk of fire though spontaneous combustion of waste material where sufficient oxygen is available. Fires pose obvious hazards of intense heat, open flame and smoke inhalation, and may also release toxic chemicals into environment. Fires may cause damage to equipment and site facilities.	Fire and explosion hazards associated with biogas at the Facility are controlled through the removal of air and the control of ignition sources. Clear emergency access and fire water cart provision. Gas build-up is monitored through on-site gas detectors with associated alarms and personal gas monitoring. Infra Red cameras are used to detect any small fire.	Even though the rate of generation of methane gas on site most likely increases with the expansion of the Facility, the buffer zone between any location at the Bioreactor or at the power station where flammable gas may be present and the site boundaries is so great that the consequences of a fire or an explosion to off-site populations are negligible.
Fire and Explosion Hazard	Methane gas can be generated in the containers during	Containers are fitted with vents to minimise the amount of	Risk of an explosion occurring during transport of the waste

Hazard	Description	Safeguards	Risk Assessment
During Transport	transport to the Woodlawn facility. Methane gas may be ignited though static electricity charges generated through the movement in the containers during transit.	methane that can build up. Transit time for waste is kept below the time needed for the significant formation of methane gas. Railcars are grounded and static electricity is unlikely to occur.	would be minimal even with the associated increase in waste quantities.
	Risk of fire and explosion during the transport of chemicals to LTP may occur due to a spillage incompatible substances mix	Chemicals will be transferred using trucks designed for delivering the chemicals. Chemicals that are not compatible will be delivered at different times Drivers are adequately trained on procedures and JSEA's for how to handle (loading, unloading, during transport, spills) chemicals	With all the safeguards in place, risk of an explosion occurring during transport of the chemicals to the LTP would be minimal.
Explosion Due to Migration of Landfill Gas Off-Site	Risk of flammable gas migrating off site through underground cracks and fissures. Explosions have been known to occur in underground or confined spaces in areas near landfills as the result of build-up of methane	The geology of the Bioreactor is such that migration of flammable gases to any off-site location is extremely unlikely to occur. A gas collection system is installed at the landfill. Further, sub-surface and surface (including accumulation) gas monitoring of methane gas is carried out in accordance with the facility's EPL and Gas Management Plan to ensure no migration offsite.	The increase in waste being transported to the site is not likely to lead to an increase in the risk of migration off-site of landfill gas. The risk of methane gas migrating off site through underground cracks and fissures is extremely small.

Hazard	Description	Safeguards	Risk Assessment
Biological hazards - disease	An effective and efficient waste disposal system significantly reduces the risk of diseases spreading throughout the population. Proper waste disposal is an important component of the public health infrastructure.	Control of pests which can transmit diseases, control of diseases relating to the health and the public and on-site personnel, and control of agricultural pests are described in detail in Section 21 of the EIS (Woodward-Clyde, 1999).	Pest and disease control are an integral part of landfill operation. With the implementation of correct operating and control procedures, the potential public health risks related to landfills are minimised.
Onsite Risk			
Fire and Explosion Hazards	Risk of fire at the landfill site due to heat generated during decomposition (leading to spontaneous ignition) and from flammable methane gas being generated in anaerobic conditions. Risk of methane gas leaking from transfer pipes. Ignition of methane may cause fire or explosion.	Generator room is constructed with fire retardant material and fitted with flammable gas detectors. Building is also automatically ventilated. Fire protection system available on site and emergency procedure available to minimise damage from fire. Gas pipes are constructed from adequate material (high density plastic) and laid in sand and then aggregate stone to prevent damage. Gas flow is monitored.	With proper management of change systems, operating procedures and training, the risk to on-site populations from fire or explosion can be reduced to acceptable levels.
	Methanol storage tank fire	Methanol tank designed to comply with AS1940 and UL2085. Methanol tank is fire rated to UL2085. All plant and equipment equipotential bonded, including flexible connection to methanol tanker. Area around	With all controls in place, the residual risk level is reduced to low.

Hazard	Description	Safeguards	Risk Assessment
		methanol storage tank is normally unmanned. Hazardous Area Classification for area completed, and all equipment selected is suitable for the zoned hazardous areas. Methanol unloading area is segregated from the methanol storage tank as per AS1940.	
Exposure to Toxic and Harmful Gases	Decomposition generates a number of gases which are harmful to human health (hydrogen sulphide, nitrogen, methane, carbon dioxide). Carbon dioxide and methane gas mainly present hazards from displacing oxygen and possibly rendering atmospheric oxygen deficient. Risk that workers may enter an oxygen deficient area without appreciating the risk. Other gases such as hydrogen sulphide are toxic and extremely harmful to human health in high concentrations.	A gas collection system is installed to minimise build-up of gases. Personnel carry gas monitoring devices and gas detectors are fitted. Confined space permit system is heavily controlled in enclosed areas or below ground level where a build-up of gases may occur. Operational use of crushed hematite on the waste to reduce the release of H2S at the surface.	The listed safeguards are imperative to control the risk of exposure to toxic and/or harmful gases by on-site population.
	Methanol vapour release	Methanol tank vent point positioned as per AS1940. Area around methanol storage tank is normally unmanned. Hazardous Area Classification for area completed, and all equipment selected is	The listed safeguards reduce the residual risk levels to low.

Hazard	Description	Safeguards	Risk Assessment
		suitable for the zoned hazardous areas.	
Biological Hazards	Risk of infection such as tetanus from cuts and abrasions when waste is handled. Solid, putrescible waste can also contain varying degrees of other pathogens with the potential to cause illness.	Restricting public access to the tipping face; compacting waste and applying covering material at regular intervals; controlling waste entry; minimising off-site movement of litter. Promoting and ensuring adherence to good hygiene practices and wearing PPE directly handling waste. All employees must have HepA, Hep B and tetanus inoculations.	Careful maintenance of the identified safeguards ensue that the risk is kept low.
Electrical Hazards	Power station – High Voltage room, LV room, generators and main corridor areas. Voltages between phases and earth, voltages across open switch contacts.	Access permits or safety clearances required for various electrical situations. Only suitably trained personnel and contractors are allowed to work on electrical equipment. Permit To Work (including HV permit) and isolation and tagging procedures apply. No work allowed during heavy electrical storms.	Provided the safeguards listed are maintained, the risk associated with electrical incidents can be adequately managed.
Safety Hazards	The site contains a number of safety hazards such as holes, ditches, uneven terrain, heavy vehicles etc.	General safety precautions such as PPE, high visibility vests worn, speed limits, training and procedures apply.	The increase in waste transfer rate is likely to increase the risk of general safety hazards to on-site populations.
Noise	The effect from noise from heavy equipment and vehicles could lead to the following hazards: Hearing damage;	Hearing guards such as ear muffs or plugs worn in certain high-noise areas (such as at the generators). Visual demarcations are used in conjunction with	The increase in waste transfer rate and operations of LTP would increase noise generation from heavy machinery and vehicles on-site. The risk of hearing loss is minimal

Hazard	Description	Safeguards	Risk Assessment
	communication interference leading to misunderstanding or confusion or to the inability to warn of a danger; and workers being startled, annoyed or distracted	audible information and alarms.	due to the safeguards available and enforced on-site. The risk of communication loss will be managed.
Heat Stress	Heat is a major hazard especially for workers wearing PPE in hot conditions.	Sensible scheduling of work and rest periods, and frequent replacement of fluids. Control of lone worker.	The risk from heat stress can be reduced to as low as reasonably practicable. Adhere to lone worker procedure.

4.4.2 Emergency Response Management

The NSW Woodlawn Bioreactor and IMF Emergency Response Plan (ERP) (TEM-328-1) incorporates the Fire and Emergency Management Plan as stipulated in the PA and the Pollution Incident Response Management Plan (PIRMP) to address the requirements of the Bioreactor's EPL which requires "an emergency response must be taken to minimise effects of any environmental harm or pollution release".

The ERP has been developed by Veolia as a means of identifying and concentrating on potential incidents and emergencies at the Bioreactor as summarised in Figure 4.2 below, and describes the general policy and approach that should be followed when dealing with an emergency or incident and is aimed at:

- Addressing various types of emergencies, including fire, explosion, rock falls, traffic accidents and wind and structural damage
- Minimising the risk to all personnel in an emergency
- Controlling any incident to minimise damage to plant, equipment, property and the environment.

The ERP is appended to this LEMP as Appendix D6 and outlines:

- Facility description, site plans and maps
- Incident identification and notification process;
- Emergency contact details;
- Emergency response procedures; and
- Training requirements

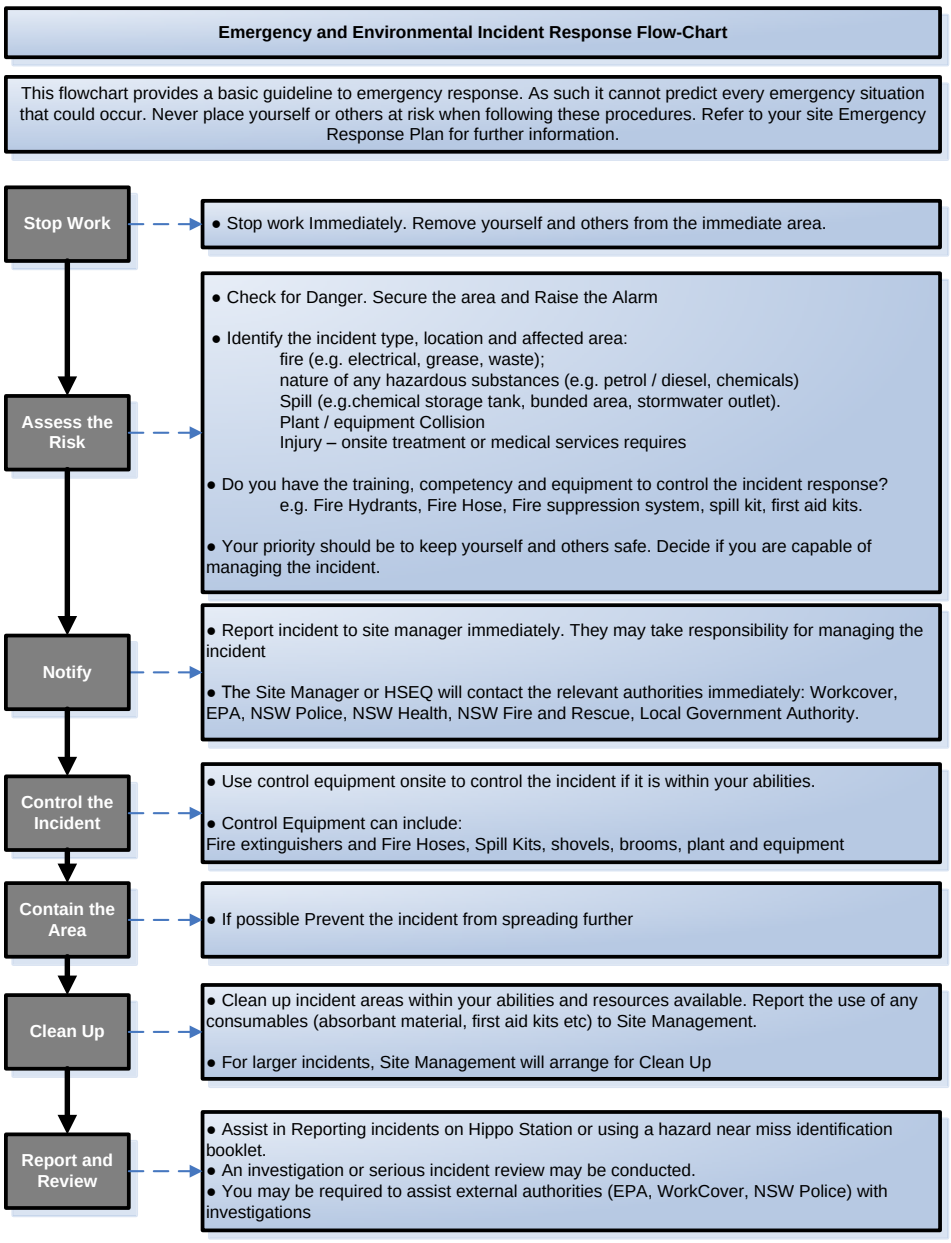


Figure 4.2 Emergency Response Flow Chart

4.4.3 Incident Notification Requirements

4.4.3.1 Incident Reporting

Incidents notification will depend on the extent of the event and the incident classification and is to take place in accordance with the NSW Incident Reporting Procedure (PRO-NSW-000-134) as summarised in Figure 4.3 below. This procedure is used for the identification and reporting of hazards and/or incidents that have affected or have the potential to affect the environment or health and safety of a worker, contractor, subcontractor or a visitor to Veolia.

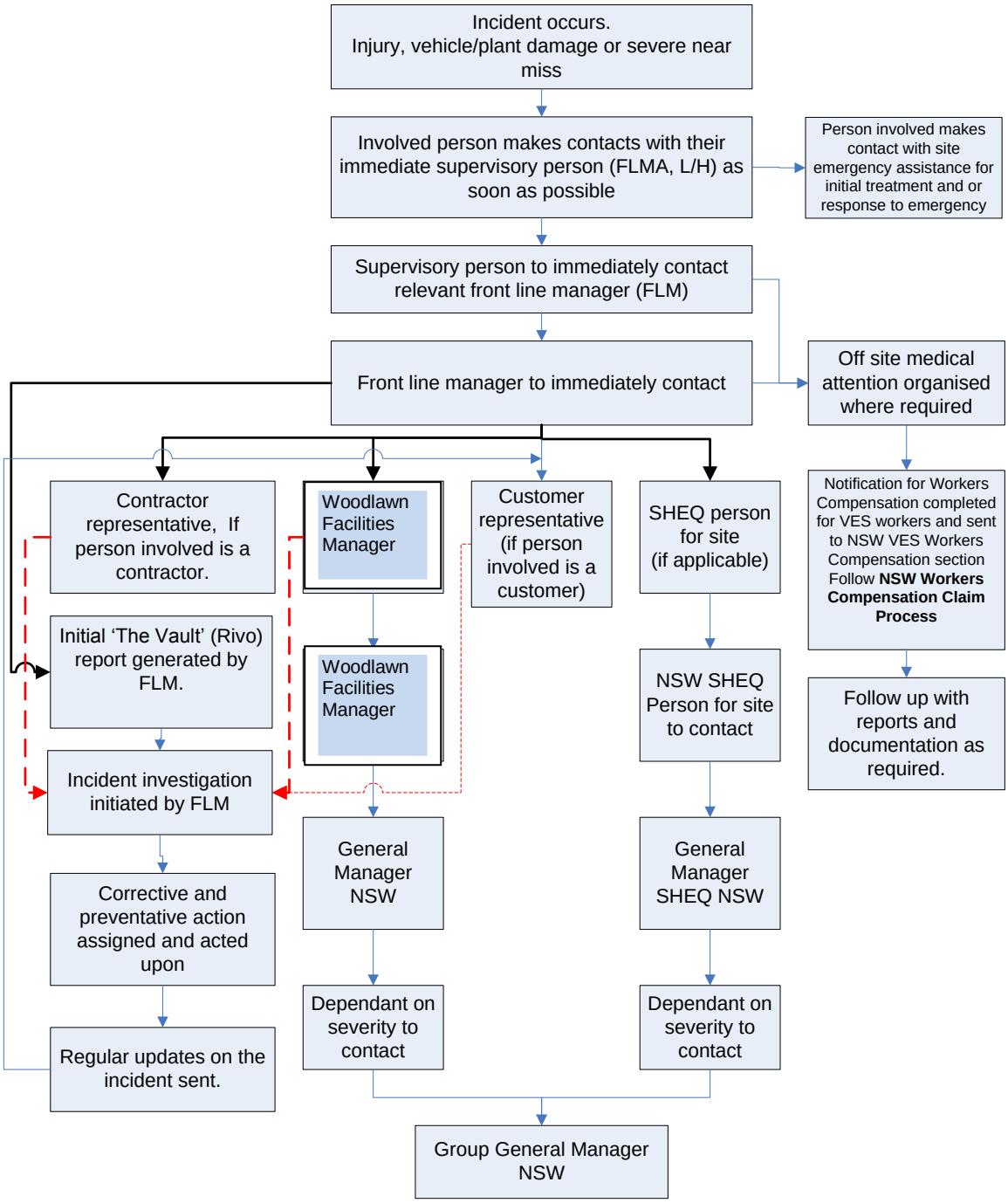


Figure 4.3 Incident Reporting Flow Chart

Incidents are to logged in The Vault and managed in the following sequence:

- Log incident;
- Investigate incident;
- Close incident;

If further action required, raise an issue or log in Rivo as an assigned action to a Veolia personnel. Corrective action will be implemented to prevent recurrence.

Any exceedance of the limits/performance criteria stipulated in the PA or the occurrence of a notifiable incident, Veolia is to **immediately** notify DPE and other relevant agencies of the exceedance/incident.

A **notifiable environmental incident** is a pollution incident where there is a risk of causing or threatening material harm to the environment. A pollution incident includes a leak, spill or escape of a substance or circumstances where this is likely to occur. Material harm includes onsite and offsite actual or potential harm to:

- The health or safety of humans;
- The environment; or
- Property damage resulting in significant costs to remediate

If a notifiable environmental incident occurs, immediately notify any of the following personnel (refer Section 4.4.3.2 Emergency Contacts):

- The Woodlawn Facilities Manager
- NSW Environment Officer
- SHEQ General Manager

It will then be decided to who will notify DPE or EPA. Where these regulators are being notified, other regulatory authorities that may require notification under the PIRMP include:

- local councils (Goulburn Mulwaree Council or Palerang Council) for where the pollution incident has occurred;
- Ministry of Health;
- Fire and Rescue NSW; and
- Any other relevant authorities.

The EPA will also be notified of any incident that represents a threat to the environment due to breaches of EPL conditions, via the EPA's 24-hour Pollution Line (131 555) and a written notice should follow within 7 days. Such incidents include, but are not limited to:

- Fires at the Bioreactor, either surface or subsurface;
- Identification of any failure of an environmental protection system;
- Detection of subsurface gas migration in a perimeter gas well at greater than 1.25% methane (v/v); and,
- Any other incident or observation that could potentially pose an immediate environmental hazard outside normal operating conditions.

4.4.3.2 Emergency Contacts

The following are the internal emergency contacts for the Bioreactor and LTP. For a comprehensive list, including regulatory authorities, local community and emergency services, refer to the ERP.

Table 4.3 Emergency Contacts

Position	Name	Phone Number	Mobile Number
General Manager NSW Resource Recovery	Mark Taylor	02 9841 2912	0418 675 320
Woodlawn Eco- Precinct Manager	Henry Gundry	02 8588 1364	0400 233 592
Woodlawn Bio-Reactor and Bio Energy Manager	David Figueiredo	02 8588 1377	0429 620 030
Bio-energy Operations Manager	Sureka Withanage	02 8588 1378	0448 165 504
Operations Supervisor	Rene Oosting	02 8588 1371	0408 432 569
LTP Supervisor	TBA	TBA	TBA
Maintenance Supervisor	Matt Alderton	02 8588 1381	0404 742 518
Environmental Officer	Harneet Puarr	02 8588 1372	-
Administration	Susan McDonald	02 8588 1385	-
Woodlawn 24 hour feedback line	-	-	1800 241 750
SHEQ Advisor Southern region	TBA	TBA	TBA

Section 5 Monitoring and Review of the LEMP

5.1 Monitoring and Reporting

5.1.1 Inspections, Testing and Monitoring

Regular environmental inspections are undertaken by the Bioreactor and LTP personnel to ensure that the environmental controls have been implemented, meet specification, and are being maintained in accordance with the NSW Inspecting and Testing Program (PRO-NSW-000-228) as summarised in Table 5.1 below.

Further details for Inspection and testing of LTP are provided in initial Maintenance Schedule (Appendix E)

Table 5.1 Bioreactor and LTP Environmental Inspection and Testing Schedule

Plant/Process/Substance	Type	Frequency	Responsibility
Air Receivers (Compressor's & Flare stack)	Inspection	2 Yearly	Maintenance
Bioreactor and LTP Site Inspection	Inspection	Monthly	Environment
EPL Monitoring and field testing devices	Testing	Monthly	Environment
Fire Alarm Systems & Equipment	Inspection/Testing	Monthly/ 6 Monthly /Annually	Environment
First Aid Kits	Inspection & refill	Quarterly	Environment

In addition, some aspects of environmental monitoring and checks are included in the routine operator duties, as per the NSW Woodlawn Bioreactor Inspection and Testing Register (REG-NSW-218-006) and recorded in appropriate checklists. For compliance related environmental monitoring, refer to Section 5.3.

At completion of each inspection, any corrective actions required are to be recorded in the Vault and managed in accordance with the NSW Corrective Action procedure (PRO-NSW-000-132) in a timely manner (refer Table 5.2):

Table 5.2

Priority	Action	Timeframe
Low	May not require immediate action. Monitor situation and schedule control action	Action typically required within 15 to 29 days
Medium	Control actions as soon as possible	Action typically required within 7 to 14 days
High	Significant and immediate control	Action typically required within 1-7 days

Compliance with all environmental regulatory criteria is a priority. Specific compliance obligations are detailed and controlled in the supplementary EMPs appended to this LEMP(refer Appendix D).

Environmental non-compliances will be managed in accordance with the NSW Incident Investigation Procedure (PRO-NSW-000-130) or on a case by case basis depending on the severity of the incident as described in the table 5.3 below:

Table 5.3

Incident Classification	**Investigation Team or Person**	**If the incident involves an injury**
1. Insignificant 2. Minor 3. Moderate	A suitable competent person from the organisational unit or functional area where the incident occurred.	An Injury/ Occupational Illness Report form must also be completed by the relevant Line Manager using the short investigation form completed in the Vault
4. Major 5. Catastrophic (Crisis)	Appropriately independent qualified person appointee as a single Lead Investigator	Long investigation form to be completed in the Vault for any injuries/occupational illness

5.1.2 Control of Monitoring and Measuring Devices for LTP

Where monitoring and measuring devices are used to provide evidence of conformity of product and/or service to determined requirements, these devices will be calibrated in accordance with original equipment manufacturer specifications and/or measured/traceable against/to national or international standards and/or other agreed arrangements. When no such agreement/standard exists the basis used for calibration or verification shall be retained as documented information.

Records of calibration will be maintained and the calibration status of the device will be clearly communicated.

Depending on the equipment to be calibrated, the calibration process will be scheduled and performed using a variety of methods:

Processing Equipment – The calibration requirements of the plant are detailed in the initial maintenance schedule (Appendix E). Work Orders are created in the CMMS for calibration of all relevant assets.

On-line Analysers – The calibration requirements of the online analysers are detailed in the Calibrated Equipment register.

If the results of a calibration are not satisfactory (if the required accuracy is not reached) or if an item of testing equipment is out of service, the equipment shall be removed from use and marked out of calibration / for repairs.

5.1.3 Compliance Reporting

Compliance reporting is required to produce systematic, comprehensive and informative reports on the environmental performance as a result of the operational activities undertaken at the Bioreactor in accordance with legislative requirements. The reports required are summarised in Table 5.4.

The reporting parameters, frequency of reporting, and items to be included in the reports are provided. For reporting requirements that relate to specific environmental aspects, refer to the relevant supplementary EMP (Appendix D).

Table 5.4 Bioreactor Reporting Requirements

Type of Report	Frequency	Distribution	Report Inclusions
Conditions Compliance Report	Every two years (September)	DPE, EPA and Council.	Assessment of compliance with consent conditions
Independent Environmental Audit	Every three years (September)	DPE, EPA, Council and the CLC	Assessment of environmental performance of facility
Independent assessment of the Leachate and Water Management system	Within six months of commissioning the LTP and annually thereafter	DPE	Assessment of the leachate and water management system of the facility
Annual Return and AEMR	Yearly (5 November)	EPL EPA	Annual Return Form; and An Annual Environmental Management Report (AEMR) including annual monitoring undertaken, summary of complaints, compliance with EPL conditions and overall environmental performance of the Bioreactor
AEMR	Yearly	DPE	An Annual Environmental Management Report (AEMR) including annual monitoring undertaken, summary of complaints, conformance with consent conditions and overall environmental performance of the Bioreactor and LTP

5.1.4 Environmental Audits

Both internal and external audits will be undertaken on a routine basis to ensure that the Bioreactor is meeting its compliance objectives, as well as to support continuous improvement.

The audits shall verify:

- the effectiveness of the LEMP to meet Veolia policies, legislative and industry standards;

- whether the measures and/corrective actions carried out conform to the objectives of the LEMP;
- the adequacy of implemented controls to minimise high risk environmental issues or operational activities; and
- identify areas for continuous improvement.

Audit findings are to be reported to the management for inclusion in management review processes or compliance reporting.

Audit reports are to be maintained in the The Vault's audit management module to enable non-conformances and opportunities for improvement identified through internal and external audit processes at the Bioreactor to be recorded, reported and responded to.

5.2 Management Review

Management reviews of the LEMP and the environmental performance of the Bioreactor will be scheduled annually to assess the continuing suitability, adequacy and effectiveness of the measures implemented.

The inputs to the management review process shall include (but not be limited to):

- internal and external audits findings;
- incidents management and investigation of non-conformance events, incidents, near misses and management of all complaints received;
- implementation of all compliance and legislative changes as identified at a corporate level; and
- trend analysis on operational data.

The output from the Management Review shall include any decisions and actions related to:

- possible changes to the management plans, procedures, practices, objectives and targets associated with the environmental management of the Bioreactor;
- improvement of the effectiveness of the Veolia management system and its processes; and
- resource needs.

In addition to the yearly reviews, periodic meetings will be conducted to review all site specific key performance indicators pertaining to the environment and relevant business systems. The following forums will form part of the management review process at the Bioreactor, conducted periodically by the site management, in conjunction with operators as required:

- Meetings;
- Toolbox talks;
- Hazard review groups;
- Serious incident reviews; and
- Miscellaneous environmental workshops

The following processes will be used for continual improvement:

- root cause identification and correction of incidents, complaints and issues of non-conformance
- root cause identification and prevention of potential incidents and non-conformances
- process/performance review, and
- enhancement of processes and generation of new initiatives.

5.3 Environmental Monitoring Program

Detailed sampling and analytical methods for the Bioreactor are defined in relevant procedures and work instructions stored on Hippo Station. These have been prepared in-line with relevant requirements, and industry standards.

The implementation of monitoring requirements is the responsibility of the Environmental Officer (Woodlawn).

All sampling strategies and protocols undertaken as part of the monitoring program will be conducted in line with industry best practice. Sampling will be performed by the Environmental Officer (Woodlawn) or contractors in accordance with the requirements set out in this LEMP and supporting EMPs.

All analysis for compliance reporting will be performed in a NATA registered laboratory.

Where monitoring and measuring devices are used to provide evidence of conformity of product to determined requirements, these devices will be calibrated in accordance with the manufacturer's recommendations. Records of calibration will be maintained and the calibration status of the device will be clearly communicated.

Depending on the equipment to be calibrated such as analysers and/or laboratory equipment, the calibration process will be scheduled and performed using a variety of methods as per various work instructions or supplier manuals.

If the results of a calibration are not satisfactory (if the required accuracy is not reached) or if an item of testing equipment is out of service, the equipment shall be removed from use and marked out of calibration / for repairs.

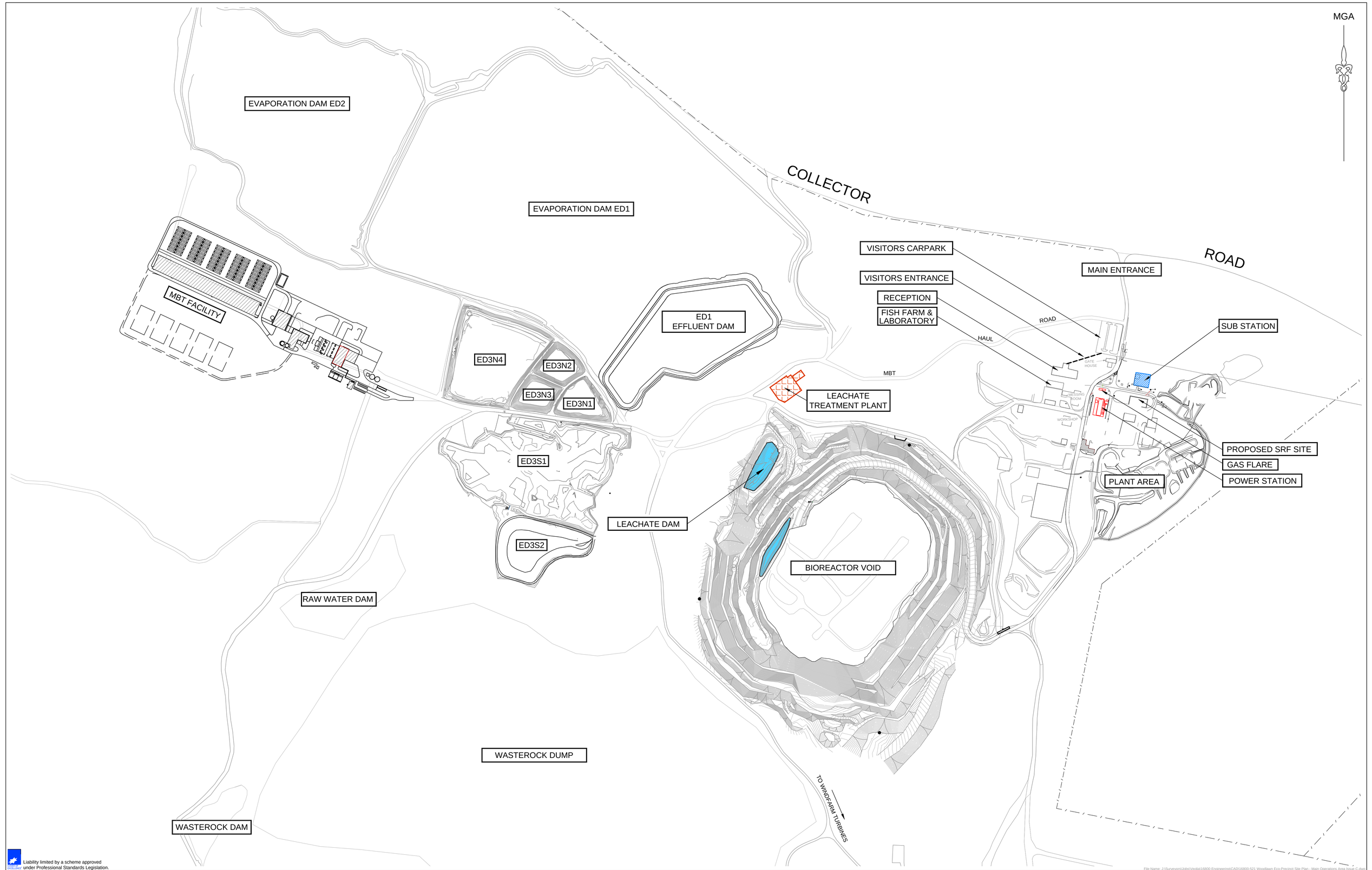
The environmental monitoring regime includes the sampling criteria, locations, parameters and frequency as identified in each of the relevant Supplementary Environmental Management Plans (refer to Appendix D).

References

- Veolia Environmental Services Environment Assessment: Woodlawn Expansion Project Volume 1 – Main Report, URS Australia Pty Ltd, August 2010
- Veolia Environmental Services Environment Assessment: Woodlawn Expansion Project Volume 2 – Appendices, URS Australia Pty Ltd, August 2010
- Wright Corporate Strategies' Public Review – Landfill Capacity and Demand prepared for NSW Government, Wright Corporate Strategy Pty Ltd, March 2009
- Waste Classification Guidelines Part 1: Classifying Waste, NSW Environment Protection Authority, November 2014;
- Environmental Guidelines: Solid Waste Landfills, NSW Environment Protection Authority, 1996.

Appendices

Appendix A - Site Plans



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VEOLIA ENVIRONMENTAL SERVICES

SCALE 1:4000

0 80 160 240 320 400

Metres

ISSUE	AMENDMENT	DRAWN	DATE
A	INITIAL ISSUE	MK	5/03/2018
B	ED1 EFFLUENT DAM DESIGN ADDED	MK	14/06/2018
C	ED1 EFFLUENT DAM RESHAPING UPDATED	MK	21/06/2018

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LandTeam

A1 SHEET

VEOLIA ENVIRONMENTAL SERVICES

WOODLAWN BIOREACTOR
COLLECTOR ROAD, TARAGO

PLAN SHOWING
WOODLAWN ECO PRECINCT INFRASTRUCTURE
PRIMARY OPERATIONS AREA
COLLECTOR ROAD, TARAGO

SURVEYED: N/A
DRAWN: MK
CHECKED: JK

ISSUE C

DRAWING No. 16800-521

DATUM N/A | CONTOUR INTERVAL N/A | DATE 21/06/2018

File Name: J:\Surveyors\Jobs\Veolia\16800 Engineering\CAD\16800-521 Woodlawn Eco-Precinct Site Plan - Main Operations Area Issue C.dwg

Appendix B - Regulatory and Policy Documents

Project Approval

Section 75J of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning and Infrastructure under delegation dated 14 September 2011, we the Planning Assessment Commission of New South Wales (the Commission) approve the application referred to in Schedule 1, subject to the conditions in Schedules 2 to 7.

These conditions are required to:

- Prevent and minimise adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the Project.

Member of the Commission

Member of the Commission

Sydney 16 March 2012

SCHEDULE 1

Application No:	10_0012
Proponent:	Veolia Environmental Services (Australia) Pty Ltd
Approval Authority:	Minister for Planning and Infrastructure
Land:	Woodlawn Bioreactor site: Lot 19 DP 827588, Lots 25, 30, 88 & 91 DP 754919 Crisps Creek Intermodal Facility site: Lot 1 DP 1045652
Project:	Woodlawn Waste Expansion Project

TABLE OF CONTENTS

SCHEDULE 2
DEFINITIONS

BCA	Building Code of Australia
Construction	The demolition of buildings or works, carrying out of works and erection of buildings and other infrastructure covered by this approval
Council	Palerang and Goulburn Mulwaree Councils
Crisps Creek IMF	Crisps Creek Intermodal Facility (see definition of site)
Department	Department of Planning and Infrastructure
Director-General	Director-General of the Department (or delegate)
DPI	Department of Primary Industries – Minerals and Petroleum
EA	Environmental assessment titled Environmental Assessment - Woodlawn Expansion Project dated August 2010 and the associated response to submissions, dated March 2011.
ED3	Evaporation Dam No. 3 as referred to in the EA
EPA	Environment Protection Authority of OEH
EP&A Act	Environmental Planning & Assessment Act 1979
EP&A Regulation	Environmental Planning & Assessment Regulation 2000
EPL	Environmental Protection Licence
Expanded operations	The point at which waste input at the Landfill exceeds 500,000 tonnes per annum.
Feasible	Feasible relates to engineering considerations and what is practical to build
Heavy Vehicle	Any vehicle with a gross vehicle mass of 5 tonnes or more
Incident	An incident causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this approval
Land	In general, the definition of land is consistent with the definition in the EP&A Act.
Landfill	The Woodlawn Bioreactor (see definition of site)
LEMP	Landfill Environmental Management Plan
LGA	Local government area
Material harm to the environment	Harm to the environment is material if it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Minister	Minister for Planning and Infrastructure
Mitigation	Activities associated with reducing the impacts of the Project
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NOW	Department of Primary Industries – NSW Office of Water
OEH	Office of Environment and Heritage
Operations	Operations are triggered by the receipt of waste on site
Regional waste	Waste from Goulburn Mulwaree, Palerang, Queanbeyan, Bega Valley, Upper Lachlan, Yass Valley, Eurobodalla and the Australia Capital Territory, or other interested regional LGAs
POEO Act	Protection of the Environment Operations Act 1997
Privately owned land	Land not owned by the Proponent or a related party
Private residential receiver	Residence in Privately owned land
Project	The development described in the EA
Proponent	Veolia Environmental Services (Australia) Pty Ltd, or its successor
Reasonable	Reasonable relates to the application of judgment in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements.
Rehabilitation	The treatment or management of land disturbed by the project for the purpose of establishing a safe, stable and non-polluting environment
RMS	Roads and Maritime Services
Site	Both the Woodlawn Bioreactor Site and the Crisps Creek Intermodal Facility Site as described in Schedule 1, unless referred to separately
Statement of Commitments	The Proponent's Statement of Commitments in Appendix 1
Tpa	Tonnes per annum

SCHEDULE 3
ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or decommissioning of the Project.

TERMS OF APPROVAL

2. The Proponent shall carry out the Project generally in accordance with the:
   (a) EA;
   (b) statement of commitments (see Appendix 1);
   (c) site layout plans and drawings in the EA (see Appendix 2); and
   (d) conditions of this approval.

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.

4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
   a) any reports, plans, strategies, programs or correspondence that are submitted in accordance with this approval; and
   b) the implementation of any actions or measures contained in these reports, plans, strategies, programs or correspondence.

LIMITS OF APPROVAL

Woodlawn Bioreactor

5. The Proponent shall not exceed the maximum annual input rates in Table 1 for the Landfill, unless otherwise agreed to by the Director-General in accordance with condition 6 below.

Table 1: Maximum waste input rates at the Landfill

Putrescible waste received by rail from Sydney	Received as residual waste from Woodlawn AWT	Putrescible regional waste received by road
900,000 tpa	100,000 tpa	50,000 tpa

6. Prior to the receipt of more than 50,000 tpa of regional waste by road at the Landfill, the Proponent shall obtain approval in writing from the Director-General to vary the limit for the receipt of regional waste not exceeding 130,000 tpa at the Landfill. Any such request must demonstrate to the satisfaction of the Director-General that the receipt of the additional regional waste from each LGA state or territory government:
   - would result in a net environmental benefit, including but not limited to:
     - the permanent closure of a smaller municipal landfill facility with poor environmental performance;
   - is not inconsistent with and would not undermine any resource recovery strategy, target/s or initiative of the source local, state or territory government; and
   - would not significantly impact on the capacity of the Landfill and its primary purpose to accept waste from Sydney.

   Note: this condition is linked to condition 3 in schedule 6 of this approval which restricts the haulage of regional waste by road to certain routes (see Appendix 4), unless otherwise approved by the Director-General.

7. In any event, no more than 1.13 million tpa of waste shall be accepted at the Landfill.

Crisps Creek IMF

8. The Proponent shall not exceed the annual throughput rates in Table 2 for the Crisps Creek IMF.

Table 2: Maximum putrescible waste throughput rates at the Crisps Creek IMF

Received by rail from Sydney	Received by rail from Sydney for processing at the Woodlawn AWT
900,000 tpa	280,000 tpa

STRUCTURAL ADEQUACY

9. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures are constructed in accordance with the relevant requirements of the BCA.

Notes:

- *Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.*

TRANSITIONAL ARRANGEMENTS

10. This approval does not affect the rights or obligations under DA No. 31-02-99 except in the event of any inconsistency between DA No. 31-02-99 and this approval, this approval shall prevail.

11. The Proponent shall ensure that the receipt of waste at the Landfill is restricted to 500,000 tpa until all conditions of this approval relating to the commencement of expanded operations have been satisfied.

12. All existing environmental management plans that apply to the site under DA No. 31-02-99 shall continue to be fully applied until replaced under this approval.

DEMOLITION

13. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601:2001: The Demolition of Structures*, or its latest version.

OPERATION OF PLANT AND EQUIPMENT

14. The Proponent shall ensure that all plant and equipment used for the Project is:
    a) maintained in a proper and efficient condition; and
    b) operated in a proper and efficient manner.

STAGED SUBMISSION OF PLANS OR PROGRAMS

15. With the approval of the Director-General, the Proponent may submit any plan or program required by this approval on a progressive basis.

COMPLIANCE

16. The Proponent must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedules 3, 4, 5 and 6. Any exceedance of these criteria and/or performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity:
    a) take all reasonable and feasible steps to bring the operation back into compliance;
    b) ensure that the exceedance does not recur;
    c) consider all reasonable and feasible options for remediation (where relevant) and how to prevent a recurrence and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
    d) implement remediation and prevention measures as directed by the Director-General,

    to the satisfaction of the Director-General.

SCHEDULE 4
SPECIFIC ENVIRONMENTAL CONDITIONS – LANDFILL SITE

WASTE MANAGEMENT

Restrictions of the Receipt, Storage, Handling and Disposal of Waste

1. The Proponent shall only receive waste on site that is authorised for receipt by an EPL.

Cover Material

2. The Proponent shall ensure that all waste cover material used on site is virgin excavated natural material and/or alternative daily cover, as approved in writing by the OEH.

Litter Control

3. The Proponent shall:
   (a) implement suitable measures to prevent the unnecessary proliferation of litter both on and off site, including the installation and maintenance of a mesh fence of not less than 1.8 metres high around the landfill; and
   (b) inspect daily and clear the site (and if necessary, surrounding area) of litter on at least a weekly basis.

AIR

Landfill Gas Limits

4. The Proponent shall ensure that landfill gas engine (LGE) emissions at the Bioreactor comply with the requirements of the *POEO (Clean Air) Regulation 2010.*

Greenhouse Gas

5. The Proponent shall implement all reasonable and feasible measures to minimise:
   (a) energy use on site; and
   (b) the greenhouse gas emissions produced on site,
   to the satisfaction of the Director-General

Odour

Discharge Limits

6. The Proponent shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.

Independent Odour Audit

7. Within 3 months of the date of this project approval, and annually thereafter, unless otherwise agreed to by the Director-General pursuant to Condition 8 of this Schedule, the Proponent shall commission and pay the full cost of an Independent Odour Audit of the project. This audit must be conducted by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Director-General. During the audit, this expert must:
   (a) consult with OEH and the Department;
   (b) audit the effectiveness of the odour controls on site in regard to protecting receivers against offensive odour;
   (c) review the Proponent's production data (that are relevant to the odour audit) and complaint records;
   (d) review the relevant odour sections of the Air Quality and Greenhouse Gas Management Plan for the project and assess the effectiveness of the odour controls;
   (e) measure all key odour sources on site including:
      i. consideration of wet weather conditions providing all raw sampling data used in this analysis;
      ii. consideration of (but not limited to) all liquid storage areas, active tipping faces, waste cover area, aged waste areas and recirculation of leachate onto waste in the void; and
      iii. a comparison of the results of these measurements against the predictions in the EA;
   (f) determine whether the project is complying with the requirements in this approval to protect receivers against offensive odour;
   (g) outline all reasonable and feasible measures (including a cost/benefit analysis, if required) that may be required to improve odour control at the site; and
   (h) recommend and prioritise (mandatory and non-mandatory) recommendations for their implementation.

8. The Director-General may vary the frequency of the audit after 5 years depending on the performance of the project and demonstrated compliance with Condition 6 of Schedule 4. This condition is linked to condition 9 in Schedule 5.

9. Within 6 weeks of the completion of an odour audit, the Proponent shall submit a copy of the audit report to both OEH and the Department with a response to any recommendations contained in the audit report.

10. Unless otherwise directed by the Director-General, the Proponent shall implement all the mandatory odour controls and recommendations of any Independent Odour Audit/s. Recommendations of the first Independent Odour Audit required under this approval shall be implemented prior to the commencement of expanded operations.

    This audit must be documented in the Landfill EMP (see condition 3 in schedule 7).

Dust Limits

11. The Proponent shall ensure that dust generated by the project does not exceed the criteria listed in Tables 3 to 5 at any private residential receiver, or on more than 25 percent of any privately owned land surrounding the site.

Table 3: Long term criteria for particulate matter

Pollutant	***Averaging period***	***[d]Criterion***
Total suspended particulate (TSP) matter	Annual	[a]90 µg/m^3
Particulate matter < 10 µm (PM_{10})	Annual	[a]30 µg/m^3

Table 4: Short term criterion for particulate matter

Pollutant	***Averaging period***	***[d] Criterion***
Particulate matter < 10 µm (PM_{10})	24 hour	[a] 50 µg/m^3

Table 5: Long term criteria for deposited dust

Pollutant	***Averaging period***	***Maximum increase in deposited dust level***	***Maximum total[1] deposited dust level***
[c]Deposited dust	Annual	[b]2 g/m^2/month	[a]4 g/m^2/month

Notes for Tables 3 -5:

- *[a]Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to other sources);*
- *[b] Incremental impact (i.e. incremental increase in concentrations due to the project on its own);*
- *[c] Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method*; *and*
- *[d] Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agree to by the Director-General in consultation with OEH.*

Air Quality Monitoring, Management and Validation

12. The Proponent shall prepare and implement an Air Quality and Greenhouse Gas Management Plan for the Landfill to the satisfaction of the Director-General. This plan must:
    (a) be prepared in consultation with OEH by a suitably qualified and experienced expert whose appointment has been endorsed by the Director-General;
    (b) be approved by the Director-General prior to the commencement of expanded operations;
    (c) describe in detail the measures that would be implemented on site to manage the air quality (particularly odour) and greenhouse gas impacts of the project to ensure compliance with this approval and other relevant statutory controls;
    (d) include a program for monitoring the air quality impacts of the project, in particular:
        - LGE specifications and monitoring of LGE emissions against the requirements of the *POEO (Clean Air) Regulation 2010* including measures that would be taken to ensure compliance with this regulation;
    (e) be revised to consider mandatory odour controls and recommendations of any Independent Odour Audit required by this approval; and
    (f) detail the remedial actions to be taken in the event that a non-compliance is identified.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

SOIL AND WATER

Pollution of Waters

13. Except as may be expressly provided in the EPL for the site, the Proponent shall comply with Section 120 of the POEO Act.

Soil

14. The Proponent shall:
    (a) minimise any soil loss through erosion on site;
    (b) where possible, set aside any topsoil won on site for the proposed revegetation and rehabilitation of the site; and
    (c) ensure that any topsoil stockpiles on site are suitably managed to ensure that the topsoil in these stockpiles can be beneficially used in the proposed revegetation and rehabilitation of the site.

Bunding

15. The Proponent shall store all chemicals, fuels and oils used on site in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund, unless double-skinned tanks are used. Any bunds shall be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or OEH's Environmental Protection Manual: *Technical Bulletin Bunding and Spill Management.*

Erosion and Sediment Control

16. During the construction, the Proponent shall implement suitable erosion and sediment control measures on site, in accordance with the relevant requirements in the latest version of the *Managing Urban Stormwater: Soils and Construction guideline.*

Soil and Water Management Plan

17. The Proponent shall prepare and implement a Soil & Water Management Plan for the Landfill to the satisfaction of the Director-General. This plan must:
    (a) be prepared in consultation with OEH and NOW by a suitably qualified and experienced expert whose appointment has been endorsed by the Director-General;
    (b) be approved by the Director-General prior to the commencement of expanded operations;
    (c) must specifically consider soil and water management (including leachate management) at the Landfill and ED3;
    (d) include a water balance for the project;
    (e) include a surface water monitoring program;
    (f) include a groundwater monitoring program; and
    (g) ensure that suitable measures are implemented to minimise water use, control soil erosion, prevent groundwater contamination, and comply with any surface water discharge limits.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

Leachate Management

18. The Proponent shall prepare and implement a Leachate Management Plan for the Landfill to the satisfaction of the Director-General. This plan must:
    (a) be prepared in consultation with OEH and NOW by a suitably qualified and experienced expert whose appointment has been endorsed by the Director-General;
    (b) be approved by Director-General prior to the commencement of expanded operations;
    (c) describe in the detail the leachate barrier system installed on site;
    (d) detail measures to collect and store all leachate generated by the landfill;
    (e) detail measures to prevent leachate from escaping to surface water, groundwater or the surrounding subsoils;
    (f) ensure all surface water from areas not subject to waste disposal or leachate disposal is directed away from the leachate management system; and
    (g) treat all water that has entered areas filled with waste, or been contaminated by leachate, as leachate.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

NOISE

Limits

19. The Proponent shall ensure that the noise generated by the operations on-site does not exceed the limits in Table 6 at any private residential receiver.

Table 6: Noise impact assessment criteria dB(A)

Receiver	6am – 10pm	10pm – 6am	
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	L_{Amax}
Any private residential receiver	35	35	45

- *Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.*

Operating Hours

20. The Proponent shall comply with the operating hours in Table 7 for the site, unless otherwise agreed in writing by the OEH.

Table 7: Operating Hours

Activity	Day	Hours
Construction	Monday - Friday	7 am – 6 pm
	Saturday	7 am – 1 pm
	Sunday & Public Holidays	Nil
Operations	Monday - Saturday	6am – 10 pm
	Sunday & Public Holidays	Nil

Monitoring and Management

21. The Proponent shall prepare and implement a Noise Monitoring and Management Plan for the Landfill to the satisfaction of the Director-General. This Plan must:
    (a) be prepared in consultation with OEH by a suitably qualified and experienced expert whose appointment has been endorsed by the Director-General;
    (b) be approved by the Director-General prior to the commencement of expanded operations;
    (c) include a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this approval;
    (d) details all reasonable and feasible measures to minimise noise at the site;
    (e) consider road traffic noise management and include a revised road traffic noise protocol;
    (f) describe mitigation measures that would be implemented in the event that a non-compliance is identified with the noise impact assessment criteria in this approval.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

Meteorological Monitoring

22. During the life of the project, the Proponent shall ensure that there is a suitable meteorological station in the vicinity of the site that complies with the requirements in the latest version of *Approved Methods for Sampling of Air Pollutants in New South Wales guideline.*

FLORA AND FAUNA

Vegetation Management Plan

23. The Proponent shall prepare and implement a Landscaping and Vegetation Management Plan for the Landfill. This plan must:
    (a) be prepared in consultation with OEH and NOW by a suitably qualified and experienced expert;
    (b) be approved by the Director-General prior to the commencement of expanded operations;
    (c) include measures to minimise such vegetation loss and additional tree planting to offset this loss;
    (d) detail any landscaping treatments at the Landfill, with particular attention to minimising the visibility of the site/s from residences and public vantage points;
    (e) describe the on-going maintenance regime for rehabilitation and vegetation management in the rehabilitation area/s.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

Pest, Vermin & Noxious Weed Management

24. The Proponent shall:
    (a) implement suitable measures to manage pests, vermin and declared noxious weeds on site; and
    (b) inspect the site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in surrounding area.

    Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the Noxious Weed Act 1993.

    These measures must be documented in the Landfill EMP (see condition 3 in schedule 7).

FIRE AND EMERGENCY MANAGEMENT

25. The Proponent shall prepare and implement a Fire and Emergency Management Plan for the Landfill. This plan must:
    (a) be prepared by a suitably qualified and experienced expert;
    (b) be approved by the Director-General prior to the commencement of expanded operations;
    (c) identify all threats to the environment and public health that could arise from the operation of the project (e.g. fire, overflow or dam failure);
    (d) identify strategies to contain and minimise the effects of any threats to the environment and public health such as (but not limited to);
        - measures to minimise the risk of fire on site, including in the landfill area;
        - actions to extinguish any fires on site promptly;
        - measures to ensure adequate fire-fighting capacity on site, including a fire fighting tanker; and
    (e) detail a communication strategy for notifying the relevant government agencies and potentially affected community in the event of an emergency.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

VISUAL AMENITY

Lighting

26. The Proponent shall ensure that the lighting associated with the project:
    (c) complies with the latest version of *AS 4282(INT) - Control of Obtrusive Effects of Outdoor Lighting*; and
    (d) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.

SECURITY

27. The Proponent shall:
    (a) install and maintain a perimeter stock fence and security gates on the site; and
    (b) ensure that the security gates on site are locked whenever the site is unattended.

LANDFILL CLOSURE AND REHABILLITATION

28. The Proponent shall prepare and implement a Closure Plan for the Landfill to the satisfaction of the Director-General. This plan must:
    (a) be prepared in consultation with the OEH and other relevant agencies by suitably qualified and experienced experts whose appointment has been endorsed by the Director-General;
    (b) be submitted to the Director-General for approval within six (6) months of the date of this approval;
    (c) ensure that the final landform of the site is consistent with the figure in Appendix 3 of this approval; and
    (d) include details of the post closure management measures for all aspects of the Project.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

29. The Proponent shall prepare and implement a Rehabilitation Management Plan for the Landfill to the satisfaction of the Director-General. This plan must:
    (a) be prepared in consultation with the OEH by a suitably qualified and experienced expert;
    (b) be submitted to the Director-General for approval within six (6) months of the date of this approval;
    (c) be undertaken in a manner which is complementary with the rehabilitation of the Woodlawn mine site; and
    (d) must ensure rehabilitation of the site does not impede or limit the rehabilitation works on any part of the Woodlawn Mine site.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

SCHEDULE 5
SPECIFIC ENVIRONMENTAL CONDITIONS – CRISPS CREEK IMF SITE

WASTE MANAGEMENT

Restrictions of the Receipt, Storage, Handling and Disposal of Waste

1. The Proponent shall only receive waste on site that is authorised for receipt by an EPL.

2. The Proponent shall ensure that any contaminated stormwater and sludges collected at the Crisps Creek IMF are disposed of at the landfill site, unless otherwise approved by OEH.

3. The Proponent shall ensure that there is no storage of sludges or overnight storage of containerised waste, on the Crisps Creek IMF site, unless otherwise approved by the OEH.

Waste Transportation

4. The Proponent shall ensure that all waste containers are designed, constructed and maintained to prevent the emission of offensive odour and be water-tight to prevent the leakage of leachate during transport and handling activities.

Litter Control

5. The Proponent shall inspect daily and clear the site (and if necessary, surrounding area) of litter on at least a weekly basis.

Pest, Vermin & Noxious Weed Management

6. The Proponent shall:
   (a) implement suitable measures to manage pests, vermin and declared noxious weeds on site; and
   (b) inspect the site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in surrounding area.

   These measures must be documented in the Crisps Creek IMF EMP (see condition 4 in schedule 7).

   Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the Noxious Weed Act 1993.

AIR

Greenhouse Gas

7. The Proponent shall implement all reasonable and feasible measures to minimise:
   (a) energy use on site; and
   (b) the greenhouse gas emissions produced on site,
   to the satisfaction of the Director-General

Odour

Discharge Limits

8. The Proponent shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.

Independent Odour Audit

9. The Proponent shall include consideration of the Crisps Creek IMF site in any Independent Odour Audit required by condition 7 in schedule 4.

SOIL AND WATER

Pollution of Waters

10. Except as may be expressly provided in the EPL for the site, the Proponent shall comply with Section 120 of the POEO Act.

Wastewater Management

11. The Proponent shall ensure that there is no vehicle or container wash down at the Crisps Creek IMF.

12. The Proponent shall ensure that:
    (a) the on-site sewage treatment system at the Crisps Creek IMF is operated in accordance with a Network Operator's Licence under the *Water Industry Competition Act 2006* , if required;
    (b) the design of the sewerage system is consistent with Council's DCP (if applicable); and
    (c) the disposal and irrigation of treated sewage is consistent with the *Environmental Guidelines Use of Effluent by Irrigation* (DECC) and the Australian guidelines for water recycling: *managing health and environmental risks (phase1) – 2006*.

Bunding

13. The Proponent shall store all chemicals, fuels and oils used on site in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund, unless double-skinned tanks are used. Any bunds shall be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or OEH's Environmental Protection Manual: *Technical Bulletin Bunding and Spill Management*.

Erosion and Sediment Control

14. During the construction, the Proponent shall implement suitable erosion and sediment control measures on site, in accordance with the relevant requirements in the latest version of the *Managing Urban Stormwater: Soils and Construction* guideline.

NOISE

Limits

15. The Proponent shall ensure that the noise generated by the operations on-site, other than freight train activities, does not exceed the limits in Table 8 at any private residential receiver.

Table 8: Noise impact assessment criteria dB(A)

Receiver	6am – 10pm	10pm – 6am	
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	L_{Amax}
Any private residential receiver	35	35	45

- *Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.*

16. Noise emissions from freight trains entering and leaving the site must not exceed the noise limit of 45 dB(A) $L_{Aeq\ (15\ minute)}$ prior to 7:00 am and 50 dB(A) $L_{Aeq\ (15\ minute)}$ after 7:00 am.

- *Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.*

Operating Hours

17. The Proponent shall comply with the operating hours in Table 9 for the site, unless otherwise agreed in writing by the OEH.

Table 9: Operating Hours

Activity	Day	Hours
Construction	Monday - Friday	7 am – 6 pm
	Saturday	7 am – 1 pm
	Sunday & Public Holidays	Nil
Operations	Monday - Saturday	6am – 10 pm
	Sunday & Public Holidays	Nil

VISUAL AMENITY

Lighting

18. The Proponent shall ensure that the lighting associated with the project:
    (a) complies with the latest version of *AS 4282(INT) - Control of Obtrusive Effects of Outdoor Lighting*; and
    (b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.

SECURITY

19. The Proponent shall:
    (a) install and maintain a perimeter stock fence and security gates on the site; and
    (b) ensure that the security gates on site are locked whenever the site is unattended.

RAIL TRAFFIC

20. The Proponent shall ensure that only 2 trains (4 movements) in total are permitted to ingress and egress from the Crisps Creek IMF per day from Monday to Saturday.

21. The tonnage of waste delivered to the IMF by train must not exceed 780 000 tpa, until the electronic signalling system has been implemented so as to eliminate the need for waste trains to stop across the road crossing at Tarago.

22. The Proponent shall prepare and implement a Rail Transport Code of Conduct for the Crisps Creek IMF in consultation with ARTC and Countrylink and to the satisfaction of the Director-General. This Plan must:
    (a) be submitted to the Director-General for approval prior to the commencement of expanded operations;
    (b) detail operational rail traffic management measures including driver code of conduct, locomotive arrival and departure procedures (e.g. reduced locomotive speed);
    (c) outline measures to minimise rail traffic noise; and
    (d) detail measures to minimise rail traffic related conflicts with existing rail operations.

SCHEDULE 6
TRAFFIC AND ROAD UPGRADES

TRAFFIC AND TRANSPORT

Delivery of Waste from the IMF to the Landfill

1. The Proponent shall ensure that at all times heavy vehicles transporting waste from the Crisps Creek IMF to the Landfill travel via the Crisps Creek IMF site access road, onto Bungendore Road, onto Collector Road and then onto the Landfill site access road.

2. The Proponent shall ensure that the reverse of the route specified in condition 1 of this schedule above is used to egress from the Landfill site at all times.

Delivery of Regional Waste by Road

3. The Proponent shall ensure that all regional waste is transported to the Landfill by road along those routes specified in Appendix 4 of this approval, unless otherwise approved by the Director-General. Alternative transport routes may be considered where they can be shown to be more efficient, if new roads are constructed in the region, where suitable upgrades occur along other transport routes to the Landfill or where they are required to allow waste to be delivered from a new locality.

   Note: this condition is linked to condition 6 in schedule 3.

Transport Code of Conduct

4. Prior to the receipt of more than 50,000 tpa of regional waste by road at the Landfill, the Proponent shall prepare and implement a Transport Code of Conduct for the project to the satisfaction of the Director-General. This protocol must:
   (a) be prepared in consultation with the RMS, Goulburn Mulwaree Council, Palerang Council and the Community Liason Committee, and be submitted to the Director-General for approval;
   (b) describe the measures to be implemented to:
      - minimise the impacts of the project on the local and regional road network including traffic noise;
      - ensure truck drivers only use road shoulders to encourage overtaking at locations where it is acceptable to do so (i.e. in terms of safety and pavement strength), as determined by Council;
      - minimise conflicts with other road users e.g. school bus operators; and
   (c) include measures to ensure truck drivers are aware of the approved routes for the transport of waste by road.

ROAD UPGRADES

<u>Palerang LGA</u>

5. Within 12 months of the date of this approval, the Proponent shall undertake a detailed pavement analysis/road safety audit of the section of Main Road 268 (Bungendore/Tarago Road) to the south of the intersection of Collector Road and Main Road 268 (Bungendore/Tarago Road) where the bitumen seal of the road is currently less than 7 metres wide. The audit shall:
   (a) be prepared by a suitably independent and qualified expert whose appointment has been endorsed by the Director-General;
   (b) be prepared in consultation with Palerang Council and the RMS;
   (c) establish the mandatory road upgrades and traffic management measures required to address all road pavement and safety issues associated with the project on this section of road; and
   (d) determine the full cost of undertaking any upgrades, and the Proponent's proportional contribution to these works based on heavy vehicle usage along Main Road 268 (Bungendore/Tarago Road).

   Note: the Proponent must submit a copy of this audit to the Department within 2 weeks of its completion. See Appendix 4 for reference to the intersection of Collector Road and Main Road 268.

6. Prior to the receipt of more than 30,000 tpa of regional waste at the Landfill by road from the south of the intersection of Collector Road and Main Road 268 (Bungendore/Tarago Road), the Proponent shall:
   (a) implement all mandatory pavement and traffic management measures required to address all road pavement/safety issues associated with the project on Main Road 268 (Bungendore/Tarago Road) recommended by the audit required by condition 5 of this schedule; and
   (b) forward fund the full cost of and provide (on Main Road 268 - Bungendore/Tarago Road) any mandatory road upgrades recommended by the audit required by condition 5 of this schedule, to the satisfaction of the Director-General.

   Note: a mechanism for recovering a proportion of the costs for undertaking any of the above measures is provided in condition 11 of this schedule. See Appendix 4 for reference to the intersection of Collector Road and Main Road 268.

7. In any case, the Proponent shall ensure that all mandatory road upgrades measures provided as part of condition 6 of this schedule are completed prior to the receipt of more than 30,000 tpa of regional waste at the Landfill by road from the south of the intersection of Collector Road and Main Road 268 (Bungendore/Tarago Road).

   Note: the Proponent must notify the Department within 2 weeks of the completion of all road upgrades required as part of this condition. See Appendix 4 for reference to the intersection of Collector Road and Main Road 268.

Goulburn Mulwaree LGA

8. Prior to the commencement of expanded operations, the proponent shall assess the need for road upgrades, on the section of Main Road 268 (Bungendore/Tarago Road) between the Crisps Creek IMF site access and the intersection of Collector Road and Bungendore/Tarago Road. This assessment shall:
   a) be prepared to the satisfaction of the Director-General;
   b) be prepared by a suitably independent and qualified expert whose appointment has been endorsed by the Director-General in consultation with RMS;
   c) evaluate the suitability of the provision of a climbing lane or other suitable road upgrade alternative/s on this section of road in terms of road traffic safety and the safety of the Proponent's truck drivers negotiating the right-hand turn into Collector Road;
   d) based on the above, identify the most suitable road upgrade option for this section of road; and, if identified as the most suitable road upgrade option by this condition 8(d)
   e) assess the need for a climbing lane against *Austroads Guide to Road Design Part 3: Geometric Design* based on heavy vehicle usage associated with the Bioreactor on this section of road.

   Note: Within 2 weeks of its completion, a report on this assessment shall be submitted to the Department for review. See Appendix 4 for reference to the intersection of Collector Road and Main Road 268.

9. Depending on which road upgrade option is identified as most suitable under condition 8(d) above, prior to the commencement of expanded operations, or a time otherwise agreed to by the Director-General, the Proponent shall provide that road upgrade on the above section of Main Road 268 (Bungendore/Tarago Road), to the satisfaction of Goulburn Mulwaree Council.

   Note: these works must be provided at no cost to Goulburn Mulwaree Council or RMS.

ROAD MAINTENANCE CONTRIBUTIONS

10. From the date of this approval, the Proponent shall pay a minimum quarterly contribution of 4.1 cents per kilometre per tonne to:
    (a) Palerang Council for waste hauled to the Landfill along Palerang Council maintained roads; and
    (b) Goulburn Mulwaree Council for waste hauled to the Landfill along Goulburn Mulwaree Council maintained roads.

    The contribution rate shall be adjusted every year from the date of this approval to account for the effects of inflation (RMS Road Cost Index).

11. The Proponent shall receive a reduction in road maintenance contributions paid to Palerang Council (in cents per kilometre per tonne of waste hauled) as required by condition 10 of this schedule based on the difference between the full cost of undertaking any mandatory road upgrades along Main Road 268 (Bungendore/Tarago Road) and what the Proponent's proportional contribution should be (as determined by the audit required by condition 5 (d) of this schedule) unless other arrangements are made with Palerang Council, to the satisfaction of the Director-General.

    Note: at any time either party may refer the matter to the Director-General for dispute resolution.

SCHEDULE 7
ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING

COMMUNITY LIASON COMMITTEE

1. The Proponent shall continue to operate a Community Liaison Committee (CLC) comprising representatives of the Proponent, the local community, Council and Supervisory Licensee. Representatives of relevant government agencies may be invited to attend meetings of the Committee as required.

   The Chairperson and procedures for the Committee including frequency of meetings shall be determined by the Committee.

2. Within six (6) months of the date of this approval, the Proponent must submit details of the CLC members including the Chairperson and frequency of meetings to the Department for the Director-General's endorsement.

ENVIRONMENTAL MANAGEMENT

3. The Proponent shall prepare and implement an Environmental Management Plan (EMP) for the Landfill to the satisfaction of the Director-General. This plan must:
   a) be submitted to the Director-General for approval prior to the commencement of expanded operations;
   b) be prepared in consultation with the OEH and other relevant agencies by a suitably qualified and experienced expert/s;
   c) provide the strategic framework for environmental management of the Landfill including all plans specified for inclusion in schedule 4;
   d) identify the statutory approvals that apply to the Landfill;
   e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Landfill;
   f) include procedures to keep the local community informed about the operation and environmental management of the Landfill;
   g) describe the procedure for stakeholder consultation and complaints handling; and
   h) include a clear plan depicting all the monitoring currently being carried out within and around the Landfill.

4. The Proponent shall prepare and implement an Environmental Management Plan (EMP) for the Crisps Creek IMF to the satisfaction of the Director-General. This plan must:
   a) be submitted to the Director-General for approval prior to the commencement of expanded operations;
   b) be prepared in consultation with the OEH and other relevant agencies by a suitably qualified and experienced expert/s;
   c) provide the strategic framework for environmental management of the Crisps Creek IMF including:
      i. water management including any surface and groundwater monitoring programs, measures to minimise water use, control soil erosion, prevent groundwater contamination, and comply with any surface water discharge limits;
      ii. noise management and monitoring protocols for evaluating compliance with the noise impact assessment criteria in this approval;
      iii. landscaping treatment at the Crisps Creek IMF to minimise visibility of the site from residences and public vantage points;
      iv. details of the on-going maintenance regime ('Works Plan') for riparian stream rehabilitation and vegetation management along the Mulwaree River;
      v. identify all threats to the environment and public health that could arise from the operation of the Crisps Creek IMF, measures to minimise these risks and notify the relevant government agencies and community in the event of an emergency;
   d) identify the statutory approvals that apply to the Crisps Creek IMF;
   e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Crisps Creek IMF;
   f) include procedures to keep the local community informed about the operation and environmental management of the Crisps Creek IMF;
   g) describe the procedure for stakeholder consultation and complaints handling; and
   h) include a clear plan depicting all the monitoring currently being carried out within and around the Crisps Creek IMF.

Annual Environmental Management Review

5. One (1) year after the commencement of expanded operations, and annually thereafter, the Proponent shall prepare an Annual Environmental Management Report (AEMR) to review the environmental performance of the project to the satisfaction of the Director-General. This review must:
   a) describe the operations that were carried out in the past year;

b) analyse the monitoring results and complaints records of the Project over the past year, which includes a comparison of these results against the
   - relevant statutory requirements, limits or performance measures/criteria;
   - monitoring results of previous years; and
   - relevant predictions in the EA;

c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
d) identify any trends in the monitoring data over the life of the Project; and
e) describe what measure will be implemented over the next year to improve the environmental performance of the Project.

INDEPENDENT ENVIRONMENTAL AUDIT

6. Every three (3) years after the first Independent Odour Audit required under condition 7 of schedule 4 of this approval, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the Project. This audit must:
   a) be conducted by a suitably qualified, experienced, and independent team of experts, including both traffic and odour experts, whose appointment has been endorsed by the Director-General;
   b) incorporate and consider the findings/mandatory recommendations of any Independent Odour Audit required by this approval.
   c) assess the environmental performance of the Project, and its effects on the surrounding environment;
   d) assess whether the Project is complying with the relevant standards, performance measures, and statutory requirements;
   e) review the adequacy of any strategy/plan/program required under this approval; and, if necessary,
   f) recommend measures or actions to improve the environmental performance of the Project, and/or any strategy/plan/program required under this approval.

COMPLAINTS HANDLING PROCEEDURE

7. Within 6 months of the date of this approval, a complaints handling procedure must be submitted to the Director-General for approval. The procedure shall be prepared in consultation with the Department, Goulburn-Mulwaree Council, the EPA and the Community Liaison Committee. The complaints handling procedure must include:
   - a formal complaint/incident reporting procedure;
   - an investigation procedure; and
   - a complaint resolution procedure.

   A report of the complaint and the response/action taken to resolve the complaint must be made publicly available on the proponent's website within 7 days of a complaint being made. *Note: The level of detail contained in the report of the complaint shall be determined in consultation with the Department, Goulburn-Mulwaree Council, the EPA and the Community Liaison Committee.*

INCIDENT REPORTING

8. Upon detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) material harm to the environment, the Proponent shall immediately (or as soon as practical thereafter) notify the Department and other relevant agencies of the exceedance/incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Revision of Plans & Programs

9. Within three (3) months of the submission of any:
   a) audit required under this approval;
   b) incident report under condition 8 of this schedule; or
   c) annual review under condition 5 of this schedule,

   The Proponent shall review, and if necessary revise the plans and programs required under this approval to the satisfaction of the Director-General.

   Note: This is to ensure the plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Project.

ACCESS TO INFORMATION

10. From the commencement of expanded operations, the Proponent shall make the following information publicly available on its website as it is progressively required by the approval:
    a) a copy of all current statutory approvals;
    b) a copy of the Environmental Management Plan required under this approval;

c) a copy of any Annual Environmental Management Report including monitoring results (over the last 5 years);
d) a copy of any Independent Environmental or Odour Audit, and the Proponent's response to the recommendations in any audit; and
e) any other matter required by the Director-General.

APPENDIX 1
PROPONENT'S STATEMENT OF COMMITMENTS

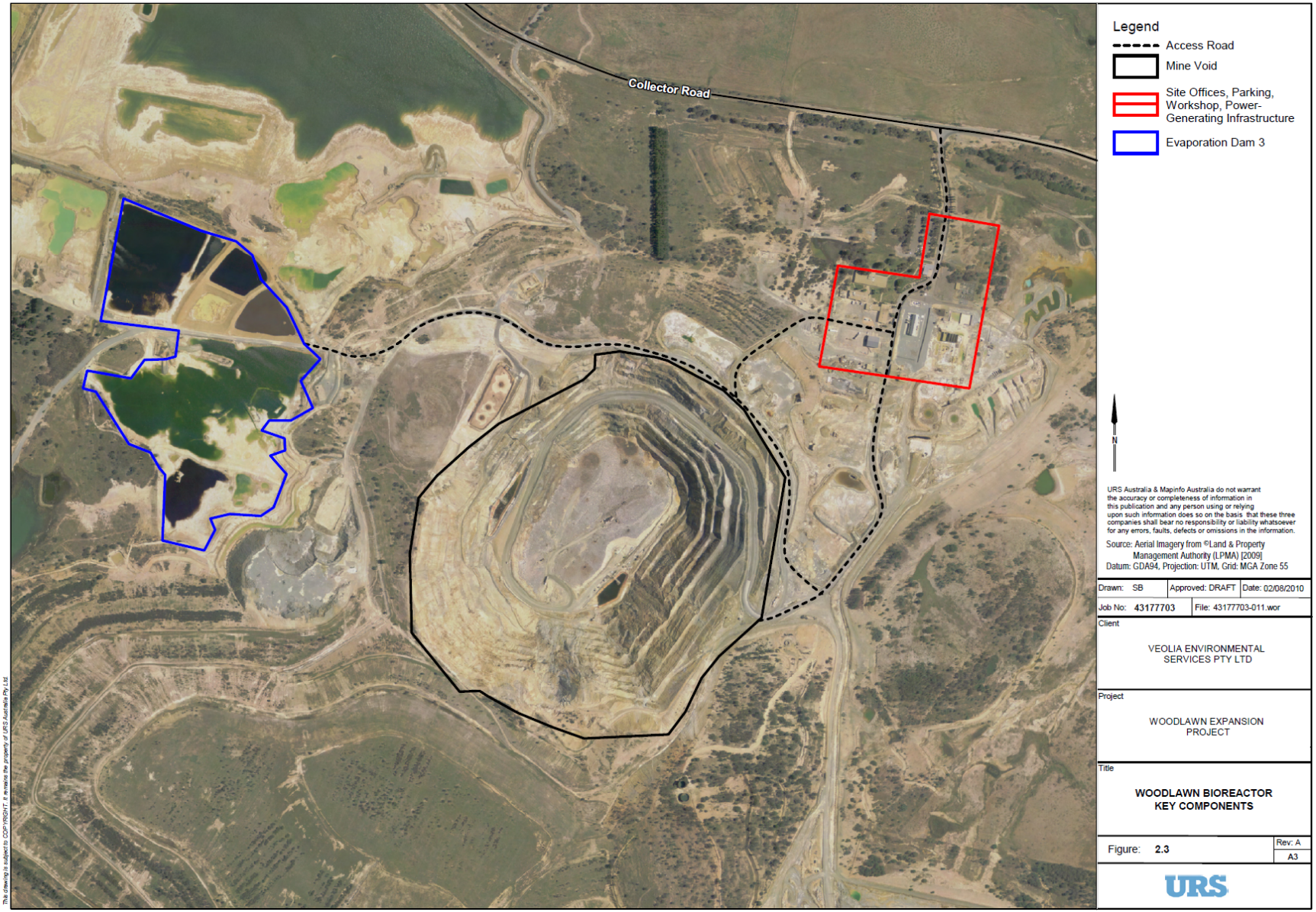
Mitigation Measure	Implementation - Operation
General Operation and Maintenance	
Ongoing Environmental Management	
The existing Environmental Management Plan for Bioreactor and the Crisps Creek IMF, including the suite of supporting documents, will continue to be the primary tools in relation to Veolia's ongoing environmental management for all operations. Where required, these management plans will be amended to take into account the provisions of the approval to increase the maximum input rate for the Bioreactor to 1.13 million tpa and the maximum throughput rate for the Crisps Creek IMF to 1.18 million tpa.	✓
Nature of Waste	
The Bioreactor and the Crisps Creek IMF will only receive General Solid Waste (putrescible) as defined by DECCW.	✓
Hours of operation	
Hours of operation for the Bioreactor and the Crisps Creek IMF are 6am to 10pm, Monday to Saturday and no work on Sundays, Good Friday or Christmas Day. Hours of operation may be varied with the written approval of DECCW.	✓
Community Engagement	
Veolia will continue to operate a 24 hour contact hotline for the duration of operations for both the Bioreactor and the Crisps Creek IMF.	✓
Veolia will continue to hold regular meetings with the Community Liaison Committee, so as to provide ongoing information to stakeholders and to resolve any operational issues that may arise from time to time.	✓
Establish additional electronic communication avenues for operational updates to the local community.	✓
Soils, Geology and Water	
Erosion	
Restrict traffic to defined site access roads where possible.	✓
Use a wheel wash to remove soil adhering to the wheels and undercarriage of trucks prior to departure from the landfill site.	✓
Install diversion drains and erosion and sediment control structures around the site to divert clean water from contaminated areas.	✓

Mitigation Measure	Implementation - Operation
Groundwater and Surface water	
Divert rainfall runoff from the sides of the pit before it comes in contact with the waste.	✓
Management of leachate in accordance with the Leachate Management Plan.	✓
Recirculate leachate on top of the waste, ensuring maximum evaporative discharge capacity.	✓
Dewatering of groundwater from the base of the pit in accordance with the Leachate Management Plan.	✓
Routinely assess rainfall, evaporation, groundwater levels, piezometer levels, pond levels, pump hours, flow meters, surface water chemistry, groundwater chemistry.	✓
Clean any drains that have become blocked through sediment pollution.	✓
Check that drains are operating as intended.	✓
Check that rehabilitated lands have established sufficient groundcover to reduce the erosion hazard effectively and initiate repair as appropriate.	✓
Control emissions of dust from unsealed roads and other exposed surfaces by use of surface sealants and/or water spray carts or other appropriate equipment. Keep surfaces moist rather than wet.	✓

Keep all sediment detention systems in good, working condition.	✓
Dispose of any pollutants removed from sediment basins in areas where further pollution to downslope lands and waterways should not occur.	✓
Construct additional erosion and/or sediment control works as might become necessary to ensure the desired protection is given to downslope lands and waterways.	✓
Air Quality and Odour	
Odour control and Air Quality Management at the facility is to be carried out in accordance with the existing Ambient Air Quality Management Plan (AAQMP).	✓
Veolia will maintain their established odour incident management system. Should any odour complaints be received, these would be recorded with the details of the location, time, odour character and duration. Details of subsequent corrective actions would be documented.	✓
Truck speed and movements on site is minimised to reduce wheel generated dust emissions.	✓
Traffic is restricted to designated sealed access roads within and around the site.	✓
Waste within the bioreactor is covered at days end.	✓
Water carts for dust suppression continue to be utilised as required.	✓
Existing monitoring and reporting requirements of the AAQMP will continue to operate.	✓
Provide odour diaries to local community members to assist in monitoring the occurrence of odour events on the site.	✓

Mitigation Measure	Implementation - Operation
Traffic and Transport	
Update the Traffic Management Plan for the existing operation activities to include the increased hours of operation and increased haulage activities	✓
Assess pavement condition and provide financial contributions to Council for repair of haulage routes	✓
Update Code of Conduct for additional regional waste movements	✓
Veolia will work with the local community to advocate for local road improvements with the relevant road authorities in addressing existing road safety concerns	✓
PHA	
An assessment of the impact of the increase in methane capture rate on the existing plant. Hazard and Operability (HAZOP) study technique or other similar methodology may be required to assess the impact of the change on plant systems to ensure that the risks associated with the methane handling is reduced to As Low As Reasonably Practicable levels.	✓
A review of the safety-implications of the increased waste transfer on on-site populations and determine whether any further safety measures are required to maintain a low level of safety risk to on-site population	✓
Landform and Site Rehabilitation	
At the conclusion of operations at the Bioreactor, infrastructure will be removed and the site will be rehabilitated and replanted with pasture species as outlined in the existing Post Closure Landfill Rehabilitation Management Plan.	✓

APPENDIX 2 - SITE LAYOUT
THE LANDFILL



CRISPS CREEK IMF

Legend

- Access Road
- Rail Sidings
- Site Office, Equipment Storage
- Hardstand Area, Container Storage

N

Source: Aerial Imagery from ©Land & Property Management Authority (LPMA [2009]
Datum: GDA94, Projection: UTM, Grid: MGA Zone 55

Drawn: SB	Approved: DRAFT	Date: 02/08/2010
Job No: 43177703	File: 43177703-012.wor	

Client: VEOLIA ENVIRONMENTAL SERVICES PTY LTD

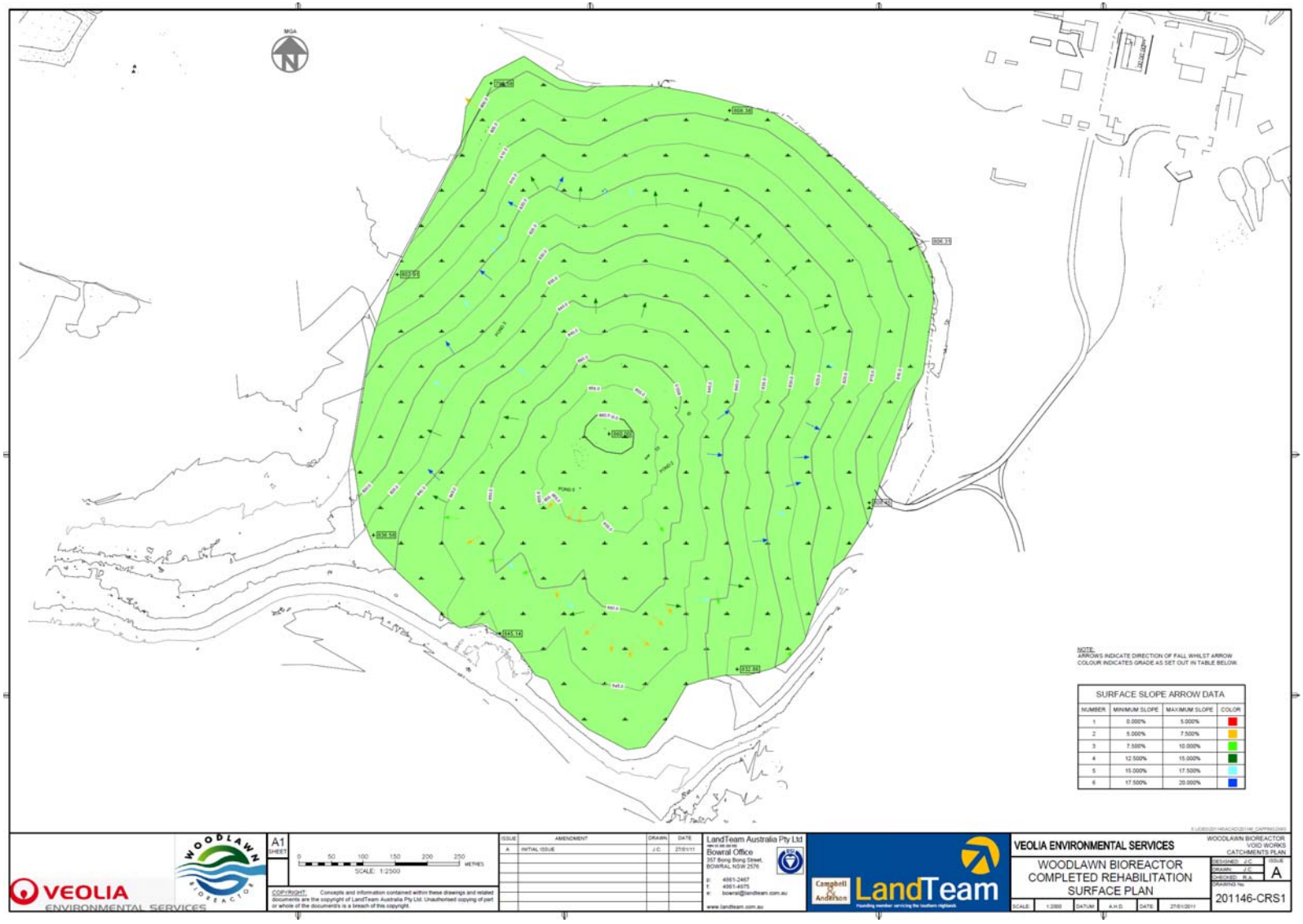
Project: WOODLAWN EXPANSION PROJECT

Title: **CRISPS CREEK IMF KEY COMPONENTS**

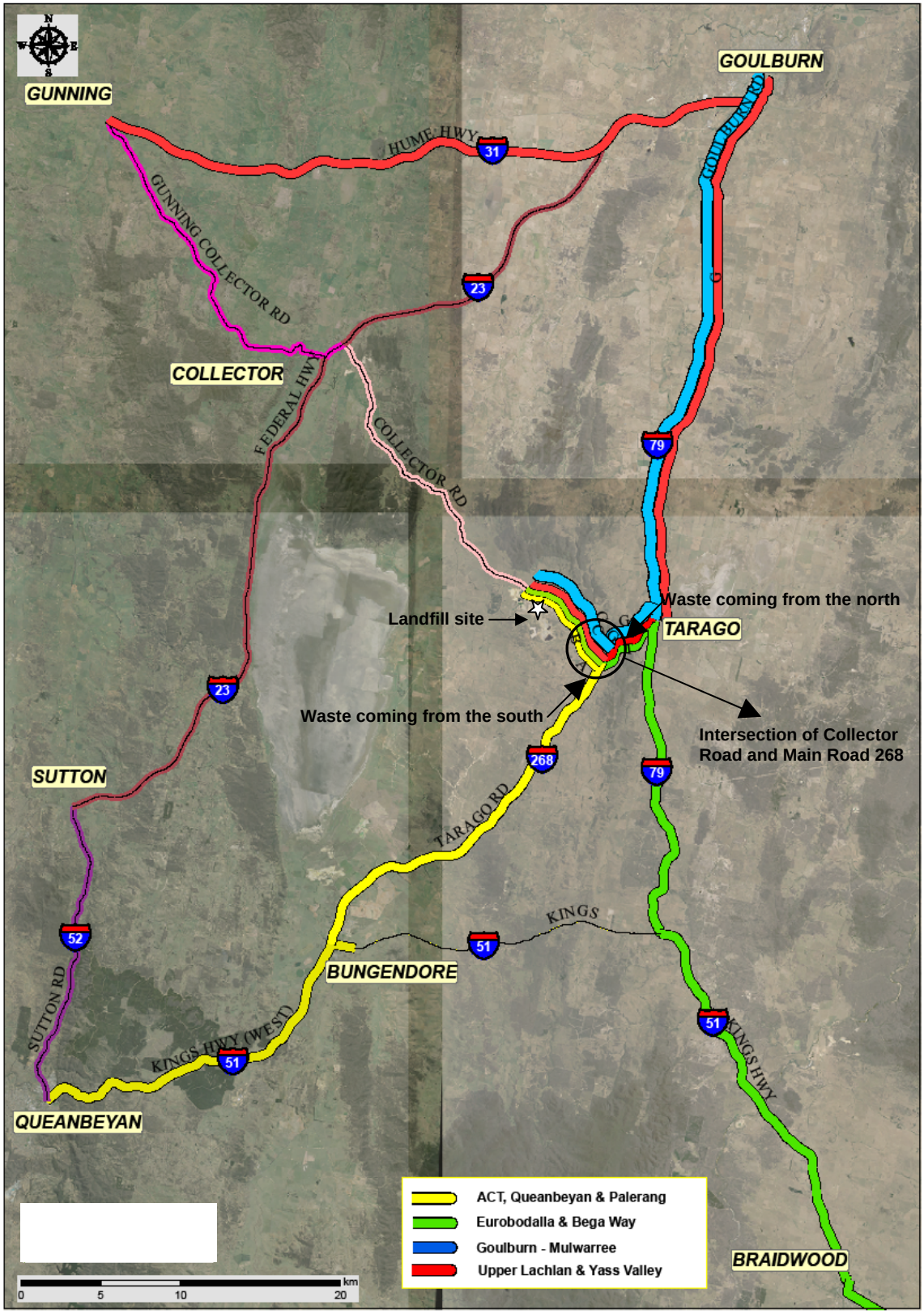
Figure: 2.8 | Rev: A | A3

URS

APPENDIX 3 - FINAL LANDFORM



APPENDIX 4
TRUCK HAULAGE ROUTES FOR REGIONAL WASTE



Notice of Modification

Section 75W of the *Environmental Planning & Assessment Act 1979*

As delegate of the Minister for Planning, I modify the Project Approval referred to in Schedule 1, subject to the conditions in Schedule 2.

Ben Lusher
Acting Executive Director
Key Sites and Industry Assessments

Sydney 9 SEPTEMBER 2016

SCHEDULE 1

Development Approval:	**MP 10_0012** granted by the Planning Assessment Commission on 16 March 2012
For the following:	Woodlawn Waste Expansion Project
Proponent:	Veolia Environmental Services (Australia) Pty Ltd
Approval Authority:	Minister for Planning
The Land:	Woodlawn Bioreactor site: Lot 19 DP 827588, Lots 25, 30, **33, 34, 69,** 88 & 91 DP 754919, **Lot 4 and 5 DP 830765, Lot 1 DP 241092** Crisps Creek Intermodal Facility site: Lot 1 DP 1045652
Modification:	**MP 10_0012 MOD 1**: Modification for changing the site water and leachate management to allow the use of: • ED2 for the mine void storm water storage; and • ED3S for treated leachate storage.

SCHEDULE 2

The above approval is modified as follows:

(a) Schedule 2 Definitions is amended in alphabetical order by the insertion of the **bold and underlined** words / numbers and deletion of ~~struck out~~ words/numbers as follows:

Department	Department of Planning and **Environment** ~~Infrastructure~~
~~Director-General~~	~~Director-General of the Department (or delegate)~~
DPI-Water	**Department of Primary Industries –Water**
ED2	**Evaporation Dam No.2, as referred to in MOD 1**
ED3N	**Evaporation Dam No.3 - North as referred to in MOD 1**
ED3S	**Evaporation Dam No.3 - South as referred to in MOD 1**
ED3S-S	**Evaporation Dam No.3 - South (southern lagoon) as referred to in Appendix 6**
EPA	**Environment Protection Authority**

Minister	Minister for Planning ~~and Infrastructure~~
MOD 1	**Modification Environmental assessment titled "Woodlawn Bioreactor, Modification to surface water and leachate management" dated 11 December 2015 and the Response to Submissions, dated June 2016.**
~~NOW~~	~~Department of Primary Industries – NSW Office of Water~~
Secretary	**Secretary of the Department (or delegate)**
Water-NSW	**NSW Water Supplier**

Delete all references to Director-General and replace with Secretary.

Delete all references to NOW and replace with DPI-Water.

(b) Schedule 3 – Condition 2 is amended by the insertion of the **bold and underlined** words / numbers and deletion of ~~struck out~~ words/numbers as follows:

Terms of Approval

2. The Proponent shall carry out the Project generally in accordance with the:
   (a) EA;
   (b) statement of commitments (see Appendix 1);
   (c) site layout plans and drawings in the EA (see Appendix 2); ~~and~~
   (d) Modification Application MP 10_0012 MOD 1; and
   (e) conditions of this approval.

(c) Schedule 4 - Condition 10 is amended by the insertion of the **bold and underlined** words / numbers and deletion of ~~struck out~~ words/numbers as follows:

Independent Odour Audit

10. Unless otherwise directed by the **Secretary** ~~Director-General~~, the Proponent shall implement all the mandatory odour controls and recommendations of any Independent Odour Audit/s. Recommendations of the **preceding** ~~first~~ Independent Odour Audit**/s** required under this approval shall be implemented prior to the commencement of expanded operations.

    This audit must be documented in the Landfill EMP (see condition 3 in schedule 7).

(d) Schedule 4 –Condition 17 is amended by the insertion of the **bold and underlined** words / numbers and deletion of ~~struck out~~ words/numbers as follows:

Soil and Water Management Plan

17. The Proponent shall prepare and implement a Soil & Water Management Plan for the Landfill to the satisfaction of the **Secretary** ~~Director-General~~. This plan must:
   (a) be prepared in consultation with **EPA**, ~~OEH~~, **and DPI-Water** ~~NOW~~ by a suitably qualified and experienced expert whose appointment has been endorsed by the **Secretary** ~~Director-General~~;
   (b) be approved by the Secretary Director-General prior to the commencement of expanded operations;
   (c) must specifically consider soil and water management (including leachate management) at the Landfill, and ED3**N ED3S, ED3S-S and ED2**;
   (d) include a water balance for the project;
   (e) include a surface water monitoring program;
   (f) include a groundwater monitoring program; and

(g) ensure that suitable measures are implemented to minimise water use, control soil erosion, prevent groundwater contamination, and comply with any surface water discharge limits.

This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

(e) Schedule 4 – is amended by the insertion of the following new Condition 17A, after Condition 17 as shown in **bold and underlined** as follows:

17A. The Proponent shall update the Soil and Water Management Plan for the landfill by including the proposed changes to water and leachate management in MOD 1. The Plan shall be prepared in accordance with the requirements of Condition 17, in consultation with Water-NSW and the EPA to the satisfaction of the Secretary. The updated Plan must be submitted for approval to the Secretary within two months of the date of this approval or as otherwise agreed to by the Secretary.

(f) Schedule 4 – Condition 18 is amended by the insertion of the **bold and underlined** words / numbers and deletion of ~~struck out~~ words/numbers as follows:

Leachate Management

18. The Proponent shall prepare and implement a Leachate Management Plan for the Landfill to the satisfaction of the **Secretary** ~~Director-General~~. This plan must:
    (a) be prepared in consultation with **EPA** ~~OEH~~, **and DPI-Water** ~~NOW~~ by a suitably qualified and experienced expert whose appointment has been endorsed by the **Secretary** ~~Director-General~~;
    (b) be approved by **Secretary** ~~Director-General~~ prior to the commencement of expanded operations;
    (c) describe in the detail the leachate barrier system installed on site;
    (d) detail measures to collect and store all leachate generated by the landfill;
    (e) detail measures to prevent leachate from escaping to surface water, groundwater or the surrounding subsoils;
    (f) ensure all surface water from areas not subject to waste disposal or leachate disposal is directed away from the leachate management system; and
    (g) treat all water that has entered areas filled with waste, or been contaminated by leachate, as leachate.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

(h) Schedule 4 – is amended by the insertion of the following new Condition 18A, after Condition 18 as shown in **bold and underlined** as follows:

18A The Proponent shall update the Leachate Management Plan for the landfill by including the proposed changes to the leachate management in MOD 1. The Plan shall be prepared in accordance with the requirements of Condition 18, in consultation with Water-NSW and the EPA to the satisfaction of the Secretary. The updated Plan must be submitted for approval to the Secretary within two months of the date of this approval or as otherwise agreed to by the Secretary.

(i) Schedule 4 – is amended by the insertion of the following new Condition 18B, after Condition 18A as shown in **bold and underlined** as follows:

Long-term Leachate Management

18B. The Proponent must develop and implement a Longterm Leachate Management Strategy that:

- **Minimises the generation of leachate at the premises;**

- **Captures, treats and disposes of all leachate generated at the premises;**
- **Maintains leachate levels in the waste mass to a level that does not inhibit the efficiency of the landfill gas extraction system;**
- **Progressively removes all treated leachate from ED3; and**
- **Minimise the emission of offensive odours from leachate treated and stored onsite so there is no offsite impact.**

The Longterm Leachate Management Strategy must be submitted to the Secretary and the EPA (for inclusion as a Pollution Reduction Program attached to environment protection licence 11436) for approval within two months of the approval date of MOD 1.

18C. Treated leachate must not be discharged to any part of ED3S, other than ED3S-S, until such time as the Long Term Leachate Management Strategy has been approved by the Secretary and the EPA.

18D. Seepage or leakage points in ED2 must be identified and repaired to the satisfaction of the Secretary and EPA prior to the transfer of any stormwater from ED3S to ED2.

18E. The Longterm Leachate Management Strategy must be operational no later than 20 December 2017 or as otherwise agreed by the Secretary.

(j) Schedule 4 – Condition 28 is amended by the insertion of the **bold and underlined** words / numbers and deletion of ~~struck out~~ words/numbers as follows:

LANDFILL CLOSURE AND REHABILLITATION

28. The Proponent shall prepare and implement a Closure Plan for the Landfill to the satisfaction of the **Secretary** ~~Director-General~~. This plan must:
    (a) be prepared in consultation with the OEH, **EPA, Water-NSW** and other relevant agencies by suitably qualified and experienced experts whose appointment has been endorsed by the **Secretary** ~~Director-General~~;
    (b) be submitted to the **Secretary** ~~Director-General~~ for approval within six (6) months of the date of this approval;
    (c) ensure that the final landform of the site is consistent with the figure in Appendix 3 of this approval; and
    (d) include details of the post closure management measures for all aspects of the Project.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

(k) Schedule 4 – Condition 29 is amended by the insertion of the **bold and underlined** words / numbers and deletion of ~~struck out~~ words/numbers as follows:

29. The Proponent shall prepare and implement a Rehabilitation Management Plan for the Landfill to the satisfaction of the **Secretary** ~~Director-General~~. This plan must:
    (a) be prepared in consultation with the OEH, **EPA, Water-NSW and other relevant agencies** by a suitably qualified and experienced expert;
    (b) be submitted to the **Secretary** ~~Director-General~~ for approval within six (6) months of the date of this approval;
    (c) be undertaken in a manner which is complementary with the rehabilitation of the Woodlawn mine site; and
    (d) must ensure rehabilitation of the site does not impede or limit the rehabilitation works on any part of the Woodlawn Mine site.

    This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).

(l) Schedule 7 – is amended by the insertion of the following new Condition 7A, after Condition 7 as shown in **bold and underlined** as follows:

7A The Proponent shall provide a report to the Secretary of the complaints received, the response/action taken and timeframe in accordance with Condition 7, on an annual basis which is to be submitted within the AEMR. The report shall include all the matters required within subsections of Condition 7.

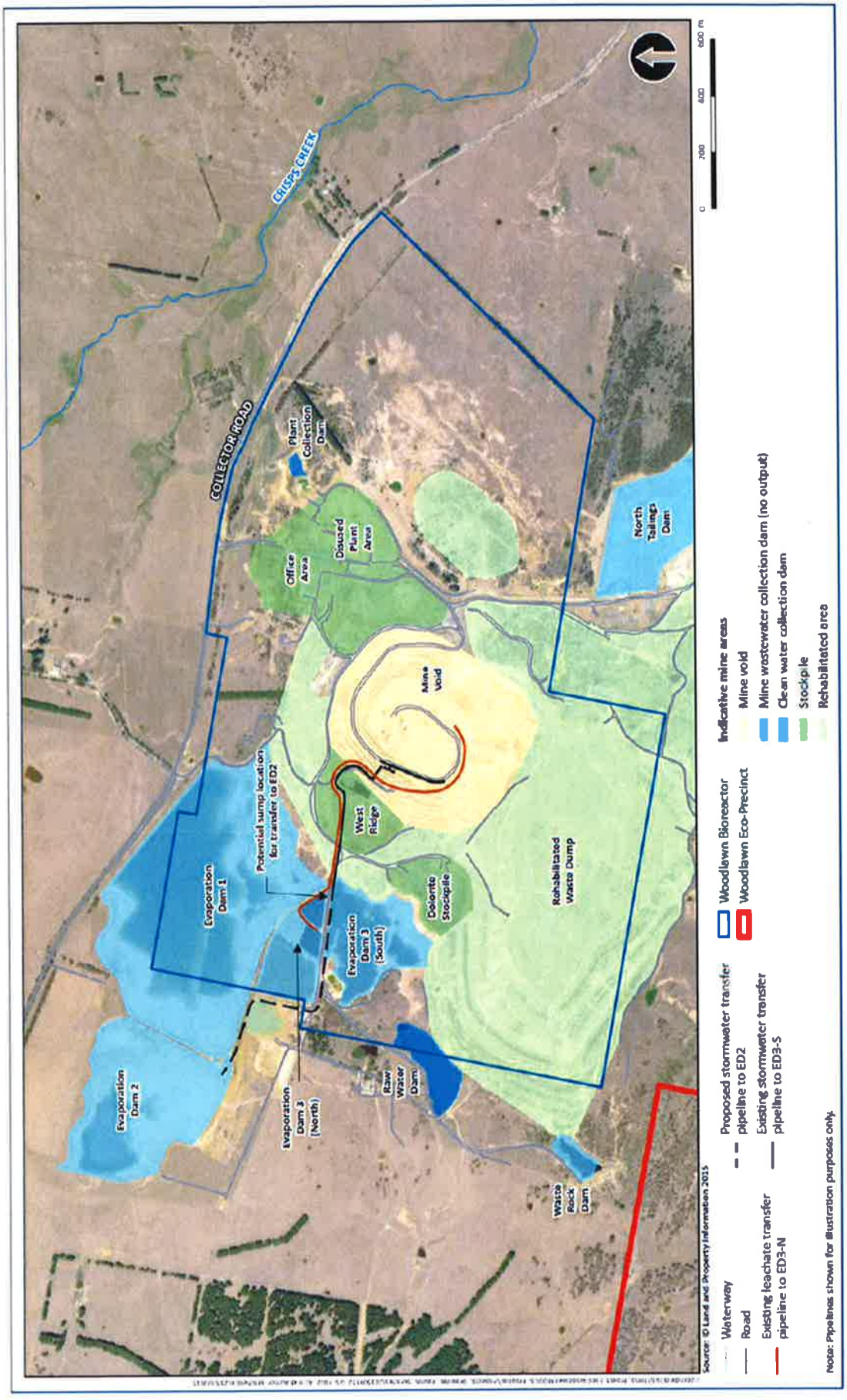
(m) Schedule 7 – Condition 10 is amended by the insertion of the **bold and underlined** words / numbers and deletion of ~~struck out~~ words/numbers as follows:

ACCESS TO INFORMATION

10. From the commencement of expanded operations, the Proponent shall make the following information publicly available on its website as it is progressively required by the approval:
    a) a copy of all current statutory approvals;
    b) a copy of the Environmental Management Plan required under this approval;
    c) a copy of any Annual Environmental Management Report including monitoring results (over the last 5 years);
    d) a copy of any Independent Environmental **and** ~~or~~ Odour Audit, and the Proponent's response to the recommendations in any audit;
    e) report of the complaints and the response/action taken to resolve the complaint as required by Condition 7;
    f) **a copy of the minutes of the Community Liaison Committee Meetings**; and
    g) any other matter required by the Director-General.

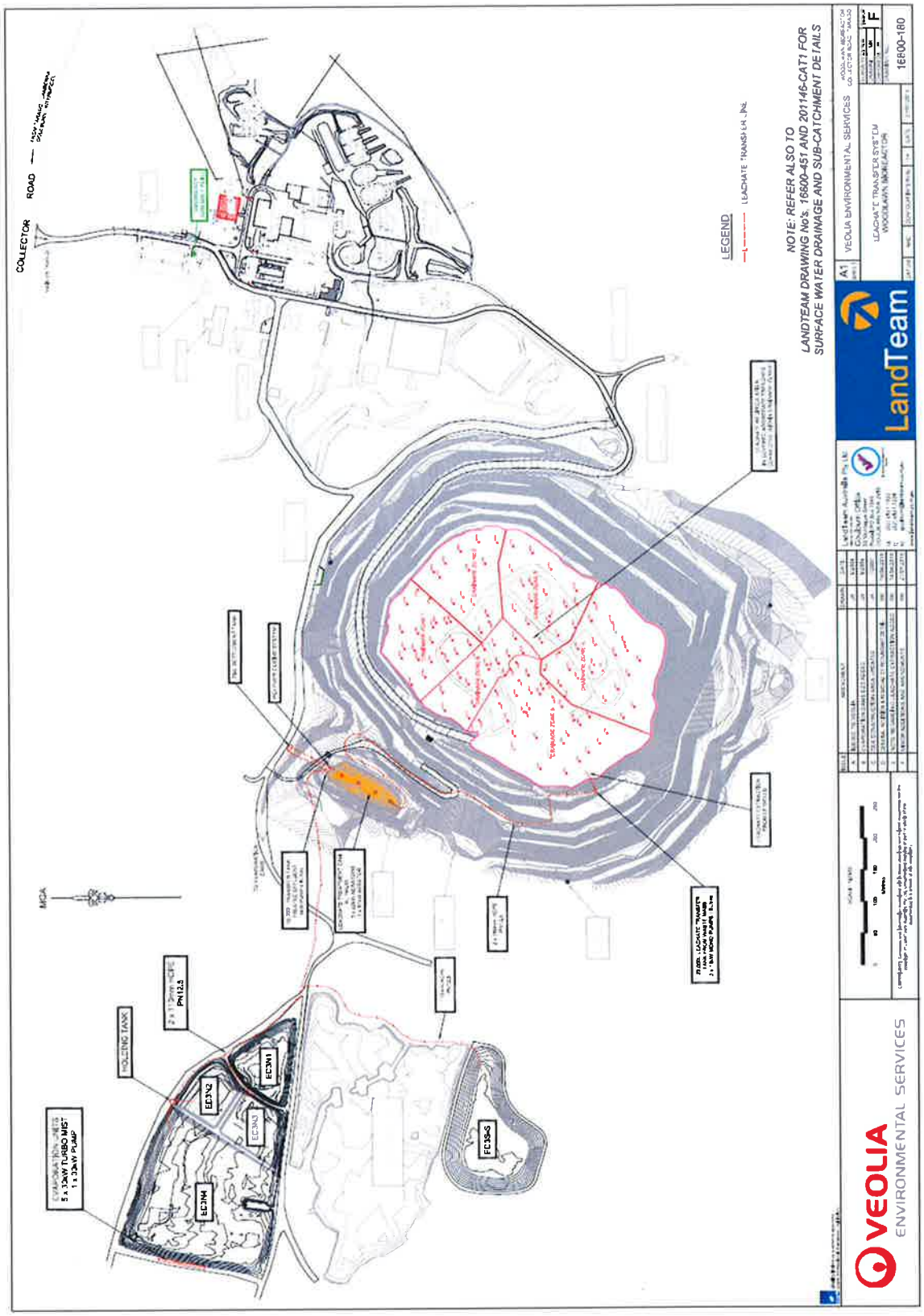
(n) Schedule 7 - Appendix 5 is included by the insertion of the following new figure titled Revised water and leachate management plan as shown in **bold and underlined** as follows:

Appendix 5 – Revised Water and Leachate Management Plan prepared by Veolia Environmental Services (Australia) Pty Ltd



(o) Schedule 7 - Appendix 6 is included by the insertion of the following new figure detailing ED3S and ED3S-S as sown in the **bold and underlined** as follows:

Appendix 6 – Detail of ED3S, showing ED3S-S prepared by Veolia Environmental Services (Australia) Pty Ltd – Revision F dated 21 July 2016



End of Modifications to MP 10_0012

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

DETERMINATION OF A DEVELOPMENT APPLICATION UNDER SECTION 80(1) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

I, the Minister for Urban Affairs and Planning, under Section 80(1) of *the Environmental Planning and Assessment Act, 1979* ("the Act") determine the Development Application ('the Application") referred to in Schedule 1 by granting consent to the Application subject to the conditions set out in Schedule 2.

The reason for the imposition of conditions is to minimise any adverse environmental effects of the development, consistent with the objectives of the Act.

Andrew Refshauge MP

Minister for Urban Affairs and Planning

Sydney 30 November 2000 File No. Q91/00233

SCHEDULE 1

Application made by: Collex Waste Management Pty Ltd ('the Applicant").

To: The Minister for Urban Affairs and Planning ("the Minister").

In respect of: Lots 5-6 in DP830765, Lots 8-9 in DP534616, Lot 19 in DP827588, Lots 14, 25, 30, 70, 86, 88, 91, and 92 in DP754919, part of the land comprising Lot 10 in DP703260 and part of the land comprising Lot 3 in DP754894.

For the following: The Woodlawn Waste Management Facility.

Development Application: DA No. 31-02-99 lodged with the Department of Urban Affairs and Planning on 16 February 1999, accompanied by a Environmental Impact Statement prepared by Woodward-Clyde and dated March 1999; EIS supplementary Report prepared by Woodward-Clyde Pty Ltd, dated March 1999; and amended DA and accompanying information prepared by Woodward-Clyde, dated 12 November 1999.

Determination:

1) To ascertain the date upon which the consent becomes effective, refer to Section 83 of the Act.

2) To ascertain the date upon which the consent is liable to lapse, refer to Section 95 of the Act.

3) Under section 89A of the Act, the Minister's determination is final and appeal rights under sections 97 and 98 of the Act do not apply.

SCHEDULE 2

CONDITIONS OF DEVELOPMENT CONSENT

ABBREVIATIONS AND INTERPRETATION

The Act	Environmental Planning and Assessment Act 1979, as amended
The Applicant	Collex Waste Management Pty Ltd
AEMR	Annual Environmental Management Report
BCA	Building Code of Australia
CLC	Community Liaison Committee
Council	Mulwaree Shire Council
DA	Development Application
The Department	The Department of Urban Affairs and Planning
The Director-General	The Director-General of the Department of Urban Affairs and Planning
DLWC	Department of Land and Water Conservation
EIS	Environmental Impact Statement
EMP	Environmental Management Representative
EPA	Environment Protection Authority
EPA Licence	means a licence under the *Protection of the Environment Operations Act 1997*
EPL	Environment Protection Licence
GTA	General Term of Approval
Leachate	means any liquid released by, or water that has percolated through waste, and that contains dissolved and/or suspended liquids and/or solids and/or gases and includes old fill leachate and new fill infiltrate
$L_{A10(15\ minute)}$	is the sound pressure level that is exceeded for 10% of the time when measured over a 15 minute period.
LEMP	an environmental waste management plan prepared in accordance with Section 75 of the *Protection of the Environment Operations Act 1997*
NPWS.	National Parks and Wildlife Service
PCA	Principal Certifying Authority
Subject Land	The land to which the DA and this consent apply.

INTEGRATED DEVELOPMENT

Integrated development is development (not being complying development) that, in order for it to be carried out, requires Development Consent and one or more of the approvals

set out in the Act. The proposal is integrated development, as it requires several other approvals, including: the consent of the National Parks and Wildlife Service under section 90 of the National Parks and Wildlife Act 1974; licensing by the Environment Protection Authority under sections 47 and 48 of the Protection of the Environment Operations Act 1997[1]; the approval of the Department of Land and Water Conservation under Part 3A of the Rivers and Foreshores Improvement Act 1948 and section 10 of the Water Act 1912; and the consent of Mulwaree Shire Council with the concurrence of the Roads and Traffic Authority under section 138 of the Roads Act 1993. The general terms of approval of the relevant approval bodies therefore form part of this consent.

GENERAL CONDITIONS

Adherence to Terms of DA and EIS

1. Development shall be carried out in accordance with:

   (a) DA No. 31-02-99;

   (b) the EIS prepared by Woodward-Clyde Pty Ltd, dated February 1999;

   (c) the EIS Supplementary Report prepared by Woodward-Clyde Pty Ltd, dated March 1999; and

   (d) the Amended DA and accompanying information prepared by Woodward-Clyde, dated 12 November 1999,

   except as modified by the following conditions.

   In the event of an inconsistency between this consent and DA No. 31.02.99 (and accompanying EIS and other supporting documents), this consent shall prevail.

Note: The Department of Mineral Resources (DMR) has advised that, upon granting of Development Consent, it will recommend that the mining lease for the Woodlawn site be amended to require compliance with the conditions of consent.

Deferred Commencement

2. In accordance with section 80(3) of the EP&A Act, this consent shall not operate until the Applicant satisfies the Minister that it has been awarded a valid contract for the long-term supply of waste, sourced from Sydney, at a rate of at least 150,000 tonnes per annum.

Duration of The Consent

3. Approval is granted for 20 years from the date of commencement of landfilling operations, subject to the input rate variations as specified in Condition 4.

Note: Extension of further landfilling activities beyond 20 years would be subject to further approvals applicable at the time.

Input Rate Variations

4. The proposed landfill shall not exceed the annual input rates in Table 1, unless otherwise approved by the Minister. The Minister shall give such approval if the need for additional capacity is demonstrated by an independent public assessment of landfill capacity and demand in the Sydney Region. The assessment shall:

[1] At the time of DA lodgement, the proposal required licensing by the Environment Protection Authority under the Pollution Control Act 1970 and the Waste Minimisation and Management Act 1995. These requirements have since been superseded by licensing requirements under the Protection of the Environment Operations Act 1997, which commenced on 1 July 1999.

(a) take into account the status of alternative technologies for putrescible waste management and be undertaken at five-yearly intervals;

(b) be completed one year before commencement of each five year period, as set out in Table 1, or at any other time at the request of the Applicant, with the first review due four years from the date of operational commencement; and

(c) be undertaken by an independent person or organisation, to be appointed by the Minister, with the costs to be funded by the Applicant.

Table 1: Maximum Input Rates

Years from date of operational commencement	Maximum Input Rate
0-5	400,000 tpa
6-10	360,000 tpa
11-15	325,000 tpa
16-20	290,000 tpa

5. In any event, no more than 500,000 tonnes shall be landfilled at the site in any one year.

Compliance with Requirements of the Director-General and Prescribed Conditions

6. The Applicant shall comply with all reasonable requirements of the Director-General in respect of the implementation of any measures arising from reports submitted in accordance with the conditions of this consent, within such time as the Director-General may agree.

7. The Applicant shall comply with all relevant conditions prescribed in Part 7 of the Environmental Planning and Assessment Regulation 1994, as required by Section 80A (11) of the Act.

Obligation to Prevent and Minimise Harm to the Environment

8. The Applicant shall:

(a) take all practicable measures to prevent and minimise harm to the environment as a result of the construction, operation, post closure and, where relevant, the decommissioning of the development; and

(b) take all practicable measures to operate the landfill as a bioreactor, to ensure to the maximum extent practicable, the biological decomposition of all organic waste and productive capture of methane.

Structural Adequacy

9. Detailed plans and specifications relating to the design and construction of all structural elements associated with the proposed development shall be submitted to the Principal Certifying Authority (PCA) prior to the commencement of construction works. Such plans and specifications shall be accompanied by certification provided by a practicing professional structural engineer or an accredited certifier certifying the structural adequacy of the proposed building design and compliance with the Building Code of Australia (BCA).

Verification of Construction

10. Upon completion of building works and prior to the issue of an occupation certificate, a certificate prepared by a suitably qualified person or a compliance certificate issued by an accredited certifier, is to be submitted to the PCA certifying that the following building components, where relevant, have been completed in accordance with approved plans and specifications:

    (a) footings;

    (b) concrete structures, including ground floor and any subsequent floors, and retaining walls and columns;

    (c) framing and roof structure;

    (d) fire protection coverings to building elements required to comply with the BCA; and

    (e) mechanical ventilation.

    The certificate/s shall demonstrate at what stage of construction inspections were undertaken.

Dispute Resolution

11. In the event that the Applicant, Council, a government authority other than the Department or the PCA cannot agree on the specification or requirements applicable under this consent, the matter shall be referred by either party to the Director-General or, if not resolved, to the Minister, whose determination of the disagreement shall be final and binding on the parties.

ENVIRONMENTAL MANAGEMENT

Environmental Services

12. The Applicant shall employ or contract suitably qualified environmental services throughout the duration of landfilling/construction and rehabilitation activities. The Applicant shall nominate an Environmental Management Representative/s (EMR/s) as the principle person responsible for overseeing environmental management of the project and supervision of environmental services. The EMR's/EMRs' qualifications, experience and appointment shall be to the satisfaction of the Director-General. The EMR/s shall have the authority to stop work if an adverse impact on the environment has occurred or is likely to occur.

    The EMR/s shall:

    (a) be responsible for the preparation or certification of all environmental management plans and procedures;

    (b) be responsible for considering and advising on matters specified in the conditions of this consent and compliance with such matters;

    (c) oversee the receipt of, and response to, complaints about the environmental performance of the project;

    (d) facilitate an induction and training program in environmental awareness and responsibility required under the Environment Protection Licence (EPL), both generally and specific to the Applicant's activities for all persons involved with construction, operation, monitoring and rehabilitation activities at all sites. The training program must be implemented annually from the commencement of the development and evaluated every three years; and

(e) be present on-site during any critical construction or operational activities as defined in the relevant Landfill Environmental Management Plan (LEMP).

Landfill Environmental Management Plan

13. Prior to the Applicant applying to the EPA for an EPL under the Protection of the Environment Operations Act 1997, the Applicant must prepare a comprehensive Landfill Environmental Management Plan (LEMP) in accordance with the EPA's *Environmental Guidelines: Solid Waste Landfills*. The LEMP shall incorporate all relevant plans and protocols as required by the conditions of this consent.

    The LEMP shall accompany the application for an EPL. *(EPA GTA)*

    Note: The EPA will review the LEMP and may, as a result, attach conditions to the EPL which are not inconsistent with the Development Consent.

Licence Applications

14. Prior to applying to the EPA for an EPL, the Applicant must be able to demonstrate that all works required to be addressed to ensure the geo-technical stability of the premises have been undertaken in accordance with:

    (a) the recommendations of the report prepared by BFP Consultants P/L, dated 17 December 1998, entitled Woodlawn Landfill – Geo-technical Study; and

    (b) the requirements of the NSW Department of Mineral Resources. *(EPA GTA)*

15. The Applicant must prepare a post closure landfill rehabilitation management plan (PCLRMP). The PCLRMP must be documented in the LEMP and must address the following:

    (a) closure strategies in the event that landfilling activities conclude prior to filling of the mine void;

    (b) site capping and revegetation in accordance with benchmark technique 28 of the Environmental Guidelines: Solid Waste Landfills;

    (c) post closure environmental monitoring;

    (d) post closure management of surface water in the event that the void is not filled with waste.

    Note: The creation of a "crater lake" as proposed in the DA is not approved as a satisfactory strategy for post-closure management.

    (e) post closure management of Evaporation Dam No 3 (ED3);

    (f) post closure leachate management, including the management of the bioreactor processes;

    (g) post closure landfill gas management;

    (h) post closure maintenance; and

    (i) the estimated costing for these works must be provided and should be based on a nominal period of at least 50 years after the landfill ceases to accept waste. The actual duration of this period will be determined from actual monitoring data at the time. *(EPA GTA)*

    Notes: An application under sections 53 and 87 of the Protection of the Environment Operations Act 1997 for a supervisory licence must be made at the same time as the application for an EPL.

    The Applicant must charge for the disposal of putrescible waste at the premises in accordance with the directions of the public authority that holds the supervisory licence in respect of the waste facility.

The disposal of waste at the premises is subject to section 88 of the Protection of the Environment Operations Act 1997 and clause 18(1)(d) of the Protection of the Environment Operations (Waste) Regulation 1996.

Community Liaison Committee

16. Prior to the commencement of construction, the Applicant shall establish a Community Liaison Committee (CLC) comprising representatives of the Applicant, the local community, Council and Supervisory Licensee. Representatives of relevant government agencies may be invited to attend meetings of the Committee as required.

    The Chairperson and procedures for the Committee including frequency of meetings shall be determined by the Committee.

Annual Environmental Management Report

17. In order to facilitate the integration of the environmental management of the subject land and the Woodlawn mine site, the Applicant shall liaise with the holder of the Woodlawn mining lease in relation to the formulation and review of the Annual Environmental Management Report (AEMR) for the mine. The AEMR shall comply with the requirements of the Director-General of the Department of Mineral Resources and be subject to review by all relevant government agencies.

Conditions Compliance Reports

18. The Applicant shall submit to the Director-General, the EPA, DLWC and Council Conditions Compliance Reports as follows:

    (a) at least one month prior to the commencement of construction works for the purposes of landfilling, or within such period as otherwise agreed to by the Director-General;

    (b) at least one month prior to the commencement of construction works for the purposes of the intermodal transfer facility, or within such period as otherwise agreed to by the Director-General;

    (c) every two years following the date of commencement of construction for the purposes of landfilling activity, or within such period as otherwise agreed to by the Director-General.

    Note: the requirements of (a) and (b) above may be satisfied by the same report if appropriate.

Independent Environmental Audits

19. Every three years following the date of this consent, or at periods otherwise agreed to by the Director-General, and until such time as agreed to by the Director-General, the Applicant shall arrange for an independent audit of the environmental performance of the development. The audits shall:

    (a) be conducted pursuant to ISO 14010 – Guidelines and General Principles for Environmental Auditing, ISO 14011 – Procedures for Environmental Monitoring and any specifications of the Director-General;

    (b) be conducted by a suitably qualified independent person approved by the Director-General;

    (c) assess compliance with the requirements of this consent;

    (d) assess the implementation of the LEMPs and review the effectiveness of the environmental management of the development; and

(e) be carried out at the Applicants' expense.

The audits shall be submitted to the Director-General, the EPA, DLWC, Council and the Community Liaison Committee.

The Applicants shall comply with all reasonable requirements of the Director-General in respect of any measures arising from or recommended by the audits and within such time as agreed to be the Director-General.

SITE REHABILITATION

Whole of Site Rehabilitation

20. The filling of the Woodlawn mine void with waste and the final rehabilitation of the land subject to the DA shall be undertaken in a manner which is complementary with the rehabilitation of the Woodlawn mine site. Details of integrated rehabilitation shall be provided in the Rehabilitation Management Plan prepared in accordance with Condition 22.

21. Activities associated with landfilling must not impede or limit the rehabilitation works on any part of the Woodlawn Mine site.

Rehabilitation Management Plan

22. The Applicant shall prepare and implement a Rehabilitation Management Plan (RMP) which addresses areas designated for revegetation and rehabilitation as well as areas deemed not to require such treatment. The RMP shall address, but not necessarily be limited to the following matters:

    (a) clear identification of proposed the new rehabilitation works to be undertaken by the Applicant, details of the Woodlawn Mine site rehabilitation works being undertaken by the mine leaseholder, and a clear definition of the respective obligations of the parties;

    (b) an outline of financial arrangements for site rehabilitation works proposed in the plan;

    (c) the rehabilitation standards to be adopted;

    (d) a rehabilitation schedule (to be reviewed on a regular basis);

    (e) a post-establishment maintenance and monitoring program for rehabilitated areas;

    (f) procedures for the removal of all derelict buildings and infrastructure;

    (g) closure strategies in the event that landfilling activities conclude prior to the capacity of the mine void being filled; and

    (h) integration of rehabilitation works with the rehabilitation of the Woodlawn mine site.

    The RMP shall be included in the LEMP.

23. The Applicant must obtain approval from the End of Mine Life Steering Committee and the EPA to disturb, obtain or use materials from the Woodlawn Mine site for the construction, operation and rehabilitation of the landfill, intermodal facility, haul roads and any other infrastructure at the premises.

24. The Applicant shall liaise with the holder of the Woodlawn mining lease in the preparation of a Mining Operations Plan (MOP) in accordance with the requirements of the Department of Mineral Resources

Financial Assurance for integration of whole of mine site rehabilitation

Notes: A financial assurance will be maintained by the mine lease holder and held by the Department of Mineral Resources for the duration of the consent. The financial security will relate to the Applicant's obligations under the conditions of this consent for the acquisition, compensation, remedial works and any requirements for the integration of landfilling activities with any existing mine rehabilitation obligations.

The amount and structure of the financial security will be agreed to the satisfaction of the Director-General of the Department of Mineral Resources. Evidence of the security deposit will be provided in each AEMR, whereby the value of the security deposit can be adjusted for rehabilitation works completed and the remaining rehabilitation liability.

EPA Financial Assurance

25. The Applicant shall provide to the EPA financial assurance commensurate with the ongoing environmental management and rehabilitation responsibilities for the landfill and associated activities. The financial assurance shall consist of:

    (a) an unconditional and irrevocable bank guarantee, or other form of financial assurance acceptable to the EPA. The financial assurance is to be adjusted annually so that it keeps pace with inflation for so long as the EPA requires it to remain in place. The amount of the assurance will be determined by an independent review of the costings applicable to activities identified in the LEMP and Conditions 55 and 159; and

    (b) an accumulating fund generated by monies set aside annually on deposit, or other form of financial assurance acceptable to the EPA which will have to be increased in a similar way, in respect of post closure works and responsibilities. The initial and ongoing annual deposit into this fund will be determined by an independent expert review of the costings applicable to activities identified in Condition 15.

    The financial assurance shall be maintained during the operation of the facility and thereafter until such time as the EPA notifies the Applicant in writing that it is satisfied that the premises have been appropriately rehabilitated and are environmentally secure.

    Written approval must be obtained from the EPA for any changes to the financial assurance detailed in this condition.

    Note: The EPA will require the lodgment of a nominal financial assurance prior to the commencement of landfilling activities. This financial assurance can be amended in line with the environmental risk associated with the premises and independent expert review of costings.

WASTE SOURCES AND TYPES

26. All waste shall be sourced from the Sydney region. All waste received at the waste management facility shall be transported by rail to the intermodal facility.

27. The only wastes that can be disposed of at the premises are as follows:

    (a) inert waste and solid waste defined in Schedule 1 of the Protection of the Environment Operations Act 1997 or waste that is assessed and classified as inert or solid waste following the technical assessment procedure outlined in Technical Appendix 1 of the Waste Guidelines;

    (b) asbestos waste (including asbestos waste in bonded matrix and asbestos fibre and dust waste resulting from the removal of thermal or acoustic insulating materials or from processes involving asbestos material, and dust from

ventilation collection systems) disposed of in accordance with clause 29 (5) of the Protection of the Environment Operation (Waste) Regulation 1996;

(c) tyres in accordance with the EPA's tyre disposal specification; and

(d) other types of waste as expressly approved by the EPA. *(EPA GTA)*

WASTE MANAGEMENT PROCEDURES

28. There shall be no storage of sludges nor overnight storage of containerised waste, on the intermodal facility site. This condition may be varied with the written approval of the EPA if it is required by police; and /or because the operation, personnel or equipment are endangered. *(EPA GTA)*

Waste Transportation

29. All containers must be designed, constructed and maintained to prevent the emission of offensive odour and be water tight to prevent the leakage of leachate from waste containers during transport and handling activities. *(EPA GTA)*

30. All pressure relief valves on the containers must be designed to meet the environmental requirements of condition 29. *(EPA GTA)*

31. A Quality Assurance Program must be developed and implemented to ensure compliance with Condition 29. The program must include but need not necessarily be limited to the following:

(a) Container integrity;

(b) Integrity and performance of rubber seals;

(c) Performance of mechanisms to filter and remove odour where required including cleaning and performance testing; and

(d) Container cleaning. *(EPA GTA)*

Spillage Response

32. A protocol must be developed and implemented to manage incidents involving spillage of waste. The protocol must include but should not necessarily be limited to procedures identifying immediate cleaning of the site, disinfection and reporting protocols. *(EPA GTA)*

Control of Incoming Wastes

33. The Applicant must develop procedures to screen deliveries of waste to ensure compliance with Condition 27. The procedure must be documented in the LEMP. *(EPA GTA)*

34. The Applicant shall use its best endeavours to ensure that all waste received at the intermodal facility is containerised.

OPERATIONAL STAGING AND LANDFILL MANAGEMENT

35. The Applicant shall prepare a landfilling schedule consistent with the concept detailed in figure 4.10 in the EIS. Details of the landfill schedule and shall be provided in the LEMP.

Cover Material

36. Cover material must be virgin excavated natural material, unless otherwise approved in writing by the EPA. *(EPA GTA)*

Note: The Applicant is encouraged to identify alternative daily cover materials and examine the feasibility of adopting such materials so as to minimise impacts of utilising virgin excavated natural material.

37. Cover material must be of a quality that will not inhibit the biological decomposition of the landfilled waste. *(EPA GTA)*

38. Cover material must be applied to a minimum depth of 15 centimetres over all exposed landfilled waste, prior to ceasing operations at the end of each day, unless otherwise approved in writing by the EPA. *(EPA GTA)*

Note: This condition does not exclude removal of daily cover at the beginning of each day to provide for the efficient operation of the bioreactor and to avoid perching of leachate within the landfilled waste mass.

39. Cover material must be applied to a depth of 30 centimetres over surfaces of the landfilled waste which are exposed for more than 90 days, unless otherwise approved in writing by the EPA. *(EPA GTA)*

Note: This condition does not exclude removal of cover prior to recommencement of active landfilling to provide for the efficient operation of the bioreactor and to avoid perching of leachate within the landfilled waste mass.

40. At least two weeks supply of cover material must be available at the premises under all weather conditions, unless otherwise approved in writing by the EPA. *(EPA GTA)*

Note: The environmental management objectives of cover material including limiting run-on and infiltration of water, controlling and minimising the risk of fire, minimising the emission of landfill gas, suppressing odour, reducing fly propagation and rodent attraction and decreasing litter generation.

Landfill Gas

41. The Applicant shall ensure to the maximum practical extent the quantity of landfill gas that is collected and treated.

42. The Applicant must ensure that any flare, power station or other proposed landfill gas treatment or beneficial re-use system is designed to provide a destruction efficiency of hydrocarbons, organic air toxics and odours of not less than 98%. *(EPA GTA)*

Note: Emissions of pollutants must comply with the standards of concentrations prescribed in the Clean Air (Plant and Equipment) Regulation 1997.

43. The flare system must be designed, installed and operated so that hydrocarbons, organic air toxics and odours are destroyed in accordance with Condition 42. The system must be provided with automatic ignition system and automatic shut-off gas valve. Scrubbers or other suitable treatment must be provided if it is required to remove hydrogen sulfide in order to comply with Condition 42.

    The system must be installed progressively during the operation of the landfill. *(EPA GTA)*

44. Any landfill gas condensate must be collected and returned to the leachate recycling system. *(EPA GTA*)

45. The landfill gas extraction and utilisation system must be designed and installed to withstand forces created by the weight and settlement of waste in the landfill.

46. All pipe work carrying landfill gas adjacent to the haul road must be designed and installed so it is protected from damage as a result of haulage activities. *(EPA GTA)*

WATER QUALITY AND MANAGEMENT

Waste Management Facility Site

47. The premises and the activities carried out therein must not pollute surface water or groundwater. *(EPA GTA)*

Groundwater and Leachate Management

48. The mine void must be managed to ensure the groundwater gradient directs groundwater flows towards the mine void, unless otherwise approved in writing by the EPA. *(EPA GTA)*

49. Maintenance of the groundwater gradient post closure of active landfill operations (including a period of after-care) must ensure that impact of any degraded residue from the landfill on groundwater represents no threat to human health or the environment.

    Note: The height of the water saturation level in the waste will be the primary means of ensuring that this condition is complied with.

50. A leachate collection/storage/recirculation/treatment system must be designed, installed and operated to:

    (a) accept other waste-waters and contaminated storm-waters generated as a result of the operation of the facility;

    (b) efficiently operate, notwithstanding the settlement of the waste;

    (c) ensure that all liquid (including rainwater, surface water, groundwater and leachate) introduced into the waste is monitored to determine its chemical composition and quantity;

    (d) ensure that liquid is not deliberately stored in the landfilled waste, unless it is necessary for the efficient decomposition of the landfilled wast.

    (e) ensure that leachate can be recirculated within the biologically active zones of the landfilled waste; and

    (f) comply with Conditions 48 and 8(b).

    Details of this system must be documented in the LEMP. *(EPA GTA)*

51. A barrier system must be designed and installed on the surfaces identified in condition 52 to limit the quantity of groundwater flowing into the mine void and to contain leachate over the period of time that the landfilled waste poses a potential environmental risk. The system must be documented in the LEMP. *(EPA GTA)*

52. The Applicant shall install the barrier system on the following surfaces of the mine void wherever these surfaces do not meet the performance requirements of Condition 53:

    (a) the base and the top elevation of the mine void; and

    (b) the localised joints, fracture zones and adits/portals.

53. The barrier system must at least achieve the performance of a 900 mm thick re-compacted clay liner with an in-situ coefficient of permeability of less than 10^{-9} metres per second.

54. A Construction Quality Assurance Plan (CQAP) for the barrier system shall be prepared and included in the LEMP.

55. The Applicant shall prepare a Leachate Contingency Management Plan (LCMP) that addresses, but not necessarily be limited to the following matters:

(a) the removal of leachate from the waste and its treatment to remove any metals or compounds at concentrations which may inhibit the biological processes of the bioreactor landfill, prior to discharging the leachate back into the landfilled waste;

(b) the storage of leachate external to the landfilled waste in the mine void;

(c) method/s for removing leachate from the waste and disposing of it to ensure effective operation of the bioreactor landfill and to ensure that the groundwater gradient directs groundwater flows into the mine void; and

(d) an estimate of the full costs for implementing each aspect of this plan. *(EPA GTA)*

56. The Applicant must not import water or other liquids into the mine void, unless otherwise approved by the EPA, except for first flush waters collected at the Intermodal Facility site and waters contained in ED3. *(EPA GTA)*

57. The Applicant shall develop a plan (known as bioreactor water management plan) which addresses the treatment of water, prior to any water being added (other than by direct rainfall) to the landfilled waste. This plan shall be included in the LEMP.

Note: The goals of this plan are to ensure that water which is of a low pH and contains heavy metals and other inorganic substances does not inhibit the biological degradation of the landfilled waste and that the groundwater gradient direction is maintained into the void.

Surface Water Management

58. There must be no discharge of waters from the area subject to the Development Application, unless more than 210mm of rain falls within a 72 hour time period (1 in 100 year ARI of 72 hours duration). *(EPA GTA)*

59. At the commencement of waste being received into the mine void the volume of water stored in ED3 shall be no greater than 40 ML.

60. The Applicant shall install drainage so that the West Ridge Catchment shall not drain into the mine void.

61. Contaminated water shall only be applied for dust suppression in the mine void, and in any areas around the perimeter of the void where any contaminated water will drain back into the void.

62. The evaporation of water by spraying shall not result in the drifting of the sprayed liquid from the area subject to the DA and also shall not cause any adverse impact to public health. The proposed method for the spray evaporation of water shall be documented in the LEMP.

63. ED3 shall not receive water stored in the Waste Rock Dam.

64. Stormwater in the mine void must only be discharged into ED3, or otherwise used for operational purposes within the landfill, as approved in writing by the EPA. *(EPA GTA)*

65. Stormwater collected in the mine void may only be transferred into ED3 provided that:

(a) The Applicant can always comply with condition 58;

(b) the concentration of ammonia in the stormwater to be transferred does not exceed 0.03 mg/L and the concentration of total organic carbon in the stormwater does not exceed 1 mg/L; and

(c) the stormwater to be transferred contains no leachate,

unless otherwise approved in writing by the EPA. *(EPA GTA)*

66. The Applicant must design and implement a Stormwater Management Scheme for the premises demonstrating compliance with Conditions 47, 48, 58, 63, 64, 65, and 8(b). This plan must be documented in the LEMP. *(EPA GTA)*

Note: The scheme will need to consider the method of the removal of excessive quantities of rainwater that falls in the mine void.

67. Vehicles leaving the area subject to the DA shall not track materials to external surfaces.

Details of the equipment or facilities must be specified in the LEMP *(EPA GTA)*

68. Containers used for transporting waste must only be washed at the container wash facility as frequently as is necessary to minimise environmental impacts from the containers. The container wash down facility must be designed, installed and operated with the aim to collect, treat and dispose of any wash down waters to the leachate collection system. Any collected solids must be returned to the active tipping face. The container wash down facility must be documented in the LEMP. *(EPA GTA)*

69. Impervious bunds must be constructed around all fuel, oil and chemical storage areas and the bund volume must be large enough to contain 110 per cent of the volume held in the largest container. The bund must be designed and installed in accordance with the requirements of the EPA Environment Protection Manual Technical Bulletin *Bunding and Spill Management*. *(EPA GTA)*

ED3 – Management

70. The Applicant must prepare a management plan for ED3 to ensure that:

(a) the dam is maintained to prevent the leakage of stored acid mine drainage waters in order to protect groundwater and surface water;

(b) adequate capacity is retained in ED3 to meet the environmental performance requirements in condition 58

(c) measures are identified to maintain adequate capacity within a suitable time period after receiving water from a rainfall event;

(d) there is an emergency plan for the management of water in excess of the capacity of ED3;

(e) the sources of water that are collected or received in ED3 are identified; and

(f) the quantity of water (in cubic metres per hour) from each source that reports to ED3 is monitored and compared in graphical format with rainfall data.

The plan must be documented in the LEMP.

Waste-water Management

71. The sewage management system must be designed, installed and operated to meet the following criteria:

(a) **Prevention of Public Health Risk.** Unacceptable public health risks must not occur resulting from human contact with the waste-water or flows discharged from the waste-water management system. Indicator faecal coliforms must be reduced to acceptable levels by an acceptable disinfection method determined in consultation with the EPA and NSW Department of Health. Consultation must be undertaken with NSW Health on the performance of the system.

(b) **Protection of Lands.** The application of waste-water to land must not result in the deterioration of the quality of the land through soil structure degradation, salinisation, waterlogging, chemical contamination or soil erosion.

(c) **Protection of Surface Waters**. Surface waters must not become contaminated by any flows discharged from the waste-water management system including waste-water, rainfall runoff, contaminated subsurface runoff or contaminated groundwater.

(d) **Protection of Groundwaters**. Underground water resources must not become contaminated by either the waste-water, or any flows discharged from the waste-water management system.

(e) **Community Amenity**. Unreasonable interference and nuisance to the public, due to odour, dust, insects, and noise above existing background levels and arising from the operation of the waste-water management system must be avoided.

(f) **Resource Utilisation**. The useful resources of waste-water, including nutrients, organic matter and water must be identified and utilised to the maximum extent possible within the bounds posed by the other environmental and health performance criteria referred to in (a) to (e) above. *(EPA GTA)*

72. Waste-water must only be applied to utilisation areas in conformance with Condition 71. *(EPA GTA)*

73. Spray from waste-water application must not drift beyond the boundary of the waste-water utilisation area to which it is applied. *(EPA GTA)*

Note: The EPA may include a buffer area for spray as part of a waste-water utilisation area.

74. Waste-water utilisation areas must effectively utilise the waste-water applied to those areas. This includes the use for pasture or crop production, as well as ensuring the soil is able to absorb the nutrients, salts, hydraulic load and organic materials in the solids or liquids. Monitoring of land and receiving waters to determine the impact of waste-water application may be required by the EPA. *(EPA GTA)*

Intermodal Facility Site

75. The Applicant shall prepare and implement a Stormwater Management Scheme for the premises in accordance with the environment protection licence. The Scheme shall include measures to mitigate the impacts of stormwater run-off from and within the premises following the completion of construction activities and meet Condition 76 *(EPA GTA)*

76. Container handling, transfer and storage areas including any hardstand areas must be paved and sealed and be provided with a first flush stormwater management system designed to capture 15mm of stormwater for each square meter of catchment area. The paved and sealed areas including first flush system must also extend to include any rail unloading areas, stormwater detention pond, oil/water separator and container loading areas. *(EPA GTA)*

77. There must be no discharge of contaminated stormwater from the premises under dry weather conditions or storm event(s) of less than 1:100 year, 24 hour duration, average recurrence interval. *(EPA GTA)*

78. All areas that involve the handling of containerised waste including container transfer and handling areas, clean container storage areas and internal roadways must be sealed. *(EPA GTA)*

<u>Waste Water Management</u>

79. Contaminated stormwater and any sludges collected at the Crisps Creek intermodal facility must be disposed of at the landfill site. *(EPA GTA)*

80. There must be no vehicle or container wash down at the premises. *(EPA GTA)*

81. The on-site sewerage waste water management system must be designed installed and operated in a manner consistent with the guidelines Environment and Health Protection for On-site Sewage Management for Single Households. *(EPA GTA)*

Rivers and Foreshore Improvement Act 1948 – Part 3A Permit (DLWC GTAs)

Note: A permit under Part 3A of the Rivers and Foreshores Improvement Act 1948 is required to carry out bridge construction, stormwater discharge works and stream bank stabilisation within 40 m of the top of the bank of the Mulwaree River at Tarago, being works associated with the establishment of the intermodal facility. A Part 3A Permit is not required for works at the mine site.

General

82. If any work is being carried out in such a manner that it may damage or detrimentally affect the stream, or damage or interfere in any way with any work, the operation on that section of the stream shall cease immediately upon the oral or written direction of the officer.

83. The Applicant may request in writing any reasons for any direction to cease operations which must be provided within 24 hours of such a request.

84. If the permit conditions have been breached, the permit holder shall restore the site to the satisfaction of the Department. If the necessary works are not completed then the permit holder shall pay a fee prescribed by the Department for the initial breach inspection and all subsequent breach inspections.

85. Operations shall be conducted in such a manner as not to cause damage or increase the erosion of adjacent stream banks. The permit holder shall carry out any reasonable instructions given by DLWC with a view to preventing damage to the banks.

86. Any vegetation or other material removed from the area of operations shall be disposed of to an appropriate site where the debris cannot be swept back into the river during a flood.

Conditions Specific to the DA

87. Operations shall be conducted in such a manner that is in accordance with the permit as not to cause damage or increase the erosion of adjacent stream banks. The permit holder shall carry out any reasonable instructions given by DLWC with a view to preventing damage to the banks.

88. Prior to the commencement of construction, the Applicant shall submit for the approval of DLWC a Soil and Water Management Plan. The Plan shall be prepared by a suitably qualified person and shall cover all works in and near the stream, staging and maintenance requirements. The Plan shall meet the requirements outlined in the NSW Department of Housing's publications (1998) *Managing Urban Stormwater: Soils and Construction* and *Managing Urban Stormwater: Treatment Techniques.*

89. The Applicant shall establish, to the satisfaction of DLWC, a riparian zone on the intermodal facility side of the Mulwaree River for the length of the intermodal facility and any associated works. The riparian zone shall be at least 40 metre in width (measured horizontally from the top of the bank) and consist of local native plant species but shall exclude bridge approaches, bridge, access roads and associated infrastructure in accordance with the Intermodal Construction Works Plan, and Soil and Water Management Plan

90. No exotic trees are to be planted within the stream or within 40 metres from the top of the bank of the stream.

91. Prior to commencing construction works the Applicant shall prepare to the satisfaction of DLWC a "Works Plan" to include Stream Rehabilitation and Vegetation Management. The Plan shall describe the proposed rehabilitation of the stream wherever disturbed, methods to stabilise the bed and banks of the stream, vegetation to be retained, additional plantings of local native vegetation, vegetation maintenance and performance criteria

92. The Applicant shall ensure that the design of the bridge over the Mulwaree River is sensitive to the corridor functions (including current and future functions) of the river and piered approaches or equivalent are to be incorporated into the design.

93. Drainage lines to the Mulwaree River are to be in accordance with the requirements of DLWC and designs included in the Intermodal Facility Works Plan are to be approved by DLWC prior to the commencement of construction works

NOISE

Hours of Construction and Operation

Construction

94. All construction work at the waste management facility and intermodal facility site that creates audible noise at residential premises must only be conducted between 7:00 am to 6:00 pm on Mondays to Fridays and between the hours of 8:00 am to 1:00 pm on Saturdays. There shall be no construction activities on Sundays or public holidays. *(EPA GTA)*

95. The delivery of material outside the hours of operation permitted by Condition 94 may take place if that delivery is required by police or other authorities for safety reasons; and/or because the operation, personnel or equipment are endangered. In such circumstances, prior notification is to be provided to the EPA and affected residents as soon as possible, or within a reasonable period in the case of an emergency. *(EPA GTA)*

96. The hours of construction specified in Condition 94 may be varied with the written consent of the EPA if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected. *(EPA GTA)*

Operation

97. All operational activities at the waste management landfill site may only be conducted between the hours of 6:00am and 7:00pm on Mondays to Saturdays and at the intermodal facility site including road haulage, may only be conducted between the hours of 7:00am to 6:00pm on Mondays to Saturdays other than train operations which may be conducted from 6:00am to 6:00pm. There must be no activities on Sundays, Good Friday or Christmas Day (Commission of Inquiry Report, January 2000). *(EPA GTA)*

98. The hours of operation specified in Condition 97 may be varied with the written consent of the EPA if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected. *(EPA GTA)*

Noise Limits

Waste Management Facility Site

99. Noise from the premises must not exceed an $L_{A10\ (15\ minute)}$ noise emission criterion of 35 dB(A) $L_{A10\ (15\ minute)}$ at the most affected residential receiver. *(EPA GTA)*

Note: Noise measurement

For the purpose of noise measures required for this condition, the L_{A10} noise level must be measured or computed at the most affected residential receiver over a period of 15 minutes using "FAST" response on the sound level meter.

For the purpose of the noise criteria for this condition, 5dB(A) must be added to the measured level if the noise is substantially tonal or impulsive in character. Measurement locations are:

- *1 metre from the facade of the residence for night time (10 pm to 7 am) assessment;*
- *at the residential boundary or 30 metres from the residence (rural situations) where boundary is more than 30 metres from residence for day time (7 am to 10 pm) assessment.*

For the purpose of noise measurements required for this condition the noise emission limits identified apply for prevailing meteorological conditions, winds up to 3m/s.

100. The noise emission limits identified in Condition 99 apply for prevailing meteorological conditions, except under conditions of temperature inversions. Noise impacts that may be enhanced by temperature inversions must be addressed by:

    (a) documenting noise complaints received to identify any patterns of temperature inversions or increased level of impacts from temperature inversions;

    (b) where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under conditions of temperature inversions should be developed and implemented. *(EPA GTA)*

Intermodal Facility Site

101. Except as provided in Condition 102, noise from the premises must not exceed an $L_{A10\ (15\ minute)}$ noise emission criterion of 35 dB(A) at the most affected residential receiver. *(EPA GTA)*

102. Noise emissions from freight trains entering and leaving the premises must not exceed the noise limit of 45 dB(A) $L_{A10\ (15\ minutes)}$ prior to 7am and 50 dB(A) $L_{A10\ (15\ minutes)}$ after 7am. These limits apply only where there are no more than two freight trains entering and leaving the premises per day, otherwise the limit in condition 101 applies. *(EPA GTA)*

103. Noise from the premises is to be measured at the most affected residential receiver to determine compliance with Conditions 101 and 102. *(EPA GTA)*

Notes: Noise measurement

For the purpose of noise measures required for these conditions, the L_{A10} noise level must be measured or computed at the most affected residential receiver using "FAST" response on the sound level meter over a period of:

- *15 minutes for condition 101; or*
- *15 minutes (duration of train entering and/or leaving site) for condition 102. (to comply with condition 102)*

For the purpose of the noise criteria for conditions 101 and 102, 5dBA must be added to the measured level if the noise is substantially tonal or impulsive in character. Measurement locations are:

- *one metre from the facade of the residence for night time (10 pm to 7 am) assessment;*
- *at the residential boundary or 30 metres from the residence (rural situations) where boundary is more than 30 metres from residence for day time (7 am to 10 pm) assessment.*

For the purpose of noise measurements required for this condition the noise emission limit identified apply for prevailing meteorological conditions, winds up to 3m/s.

104. The noise emission limits identified in conditions 101 and 102 apply for prevailing meteorological conditions, except under conditions of temperature inversions. Noise impacts that may be enhanced by temperature inversions must be addressed by:

    (a) documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions; and

    (b) where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under conditions of temperature inversions should be developed and implemented. *(EPA GTA)*

Noise Management

105. The Applicant shall prepare and implement a Road Traffic Noise Management Protocol. The Applicant shall aim to meet the noise criteria set out in the EPA's *Environmental Guidelines for Road Traffic Noise*. The Protocol shall include, but not necessarily be limited to details about:

    (a) scheduling movements outside critical time periods (for example, 6:00am to 7:00am);

    (b) more stringent limits for noise emission from vehicles (eg. using specially designed "quiet" trucks and/or trucks required to use air bag suspension);

    (c) driver education;

    (d) limiting usage of exhaust brakes;

    (e) type of road surface;

    (f) in consultation with Mulwaree Shire Council exploring opportunities to reduce speed limits for trucks;

    (g) regular maintenance of road surface;

    (h) ongoing community liaison to monitoring complaints; and

    (i) phasing in the increased road use; and

    (j) options for overnight parking of haulage trucks.

106. The Applicant, with input from the rail service provider, shall prepare and implement an Operational Noise Management Protocol for the Intermodal facility. The Protocol shall include, but not necessarily be limited to details about:

    (a) the incorporation of all reasonable and feasible noise mitigation methods for trains entering the site from the main line, shunting, rail movements on site, container movements, and truck movements;

    (b) scheduling of train movements outside critical time periods;

    (c) using the quietest trains possible;

    (d) employee education;

    (e) using quiet couplings for trains

    (f) using quiet forklifts;

    (g) regular maintenance of rail track, roads, hard stand areas, equipment;

    (h) ongoing community liaison to monitoring complaints (eg. complaints line); and

    (i) negotiated agreements for noise complaints if noise issues become unresolvable.

107. A Construction Noise Management Protocol must be prepared and submitted with the LEMP and implemented by the Applicant. The Protocol must include but is not necessarily limited to details about:

    (a) compliance standards;

    (b) community consultation;

    (c) complaints handling monitoring/system;

    (d) site contact person to follow up complaints;

    (e) mitigation measures;

    (f) the design and operation of the proposed mitigation methods demonstrating best practice;

    (g) construction times;

    (h) contingency measures where noise complaints are received; and

    (i) monitoring methods and programs.

NOISE IMPACTS

Consultation with Pylara Pty Ltd

108. In the event that Pylara Pty Ltd considers that road traffic noise (relating to the subject development) at any dwelling on its property is in excess of relevant noise criteria set out in this consent, the Applicant shall, upon a written request from Pylara:

    (a) undertake direct consultation with Pylara Pty Ltd on the issues raised;

    (b) make arrangements for and fund an independent noise investigation to quantify noise levels and sources; and

    (c) if adverse impacts are identified, modify where practicable road transport operations in order to mitigate such impacts.

Land Acquisition

109. Within six months of receipt of a written request from Pylara Pty Ltd (ACN 000 077 672), the Applicant shall purchase the whole of the property known as “Pylara”, via Tarago. The request may be made at any time after this approval, despite any other conditions. The purchase, including acquisition price, shall be on the terms agreed between the Applicant and Pylara Pty Ltd. The acquisition price shall be fair and reasonable, shall take into account all relevant matters, and shall, at least, include payment for :

    (a) a sum not less than the current market value of Pylara Pty Ltd’s interest in Pylara at the date of this consent, having regard to:

        (i) the existing use and permissible use of the land in accordance with the applicable planning instruments at the date of the written request; and

        (ii) the presence of improvements at Pylara and/or any Council approved building or structure which although substantially commenced at the date of request is completed subsequent to that date; and

        (iii) as if Pylara was unaffected by the Applicant’s Development Proposal.

(b) reasonable compensation to Pylara Pty Ltd for disturbance allowance and relocation costs within the Mulwaree Shire, or within such other location as may be determined by the Director-General in exceptional circumstances; and

(c) Pylara Pty Ltd's reasonable costs for obtaining legal advice and expert witnesses for the purposes of establishing the acquisition price of Pylara and the terms upon which Pylara Pty Ltd is seeking for it to be acquired.

110. In the event that the Applicant and Pylara Pty Ltd cannot agree within three months upon the acquisition price of Pylara and/or the terms upon which it is to be acquired under the terms of this consent, then:

(a) either party may refer the matter to the Director-General, who shall request the President of the Australian Property Institute to appoint a qualified independent valuer or Fellow of the Institute, who shall determine, *after consideration of any submissions from the owner's and the Applicant, a fair and reasonable* acquisition, price for Pylara as described in sub-clause (a) and/or terms upon which it is to be acquired;

(b) in the event of a dispute regarding outstanding matters that cannot be resolved, the independent valuer shall refer the matter to the Director-General, recommending the appointment of a qualified panel. The Director-General, if satisfied that there is a need for a qualified panel, shall arrange for the constitution of the panel. The panel shall consist of:

(i) the appointed independent valuer,

(ii) the Director-General or nominee, and

(iii) the president of the Law Society of NSW or nominee.

(c) The qualified panel shall advise the independent valuer on the outstanding matters that the independent valuer refers for it's consideration, following which the independent valuer shall determine a fair and reasonable acquisition price as described in condition 109 and/or the terms upon which Pylara is to be acquired.

111. The Applicant shall bear the costs of any valuation or survey assessment requested by the independent valuer, panel or the Director-General.

112. The Applicant shall, within fourteen days of receipt of a determination by the independent valuer, offer in writing to Pylara Pty Ltd to acquire the relevant land at a price no less than the said acquisition price as determined, and upon any terms set out by the independent valuer.

AIR QUALITY

Odour

Waste Management Facility Site

113. There shall be no offensive odour emitted from the premises, in accordance with Section 129 of the Protection of the Environment Act 1997, nor emissions to the atmosphere from the landfill that may adversely affect the health or amenity of the community. *(EPA GTA)*

114. A meteorological station shall be installed and operated on the landfill site in accordance with the following Australian Standards:

(a) AS 2922-1987 Ambient air – Guide for the siting of sampling units; and

(b) AS 2923-1987 Ambient air – Guide for measurement of horizontal wind for air quality applications.

The meteorological station shall measure and electronically log wind speed, wind direction, ambient temperature, sigma theta (standard deviation of the horizontal wind direction fluctuation), solar radiation. All parameters must be logged at 15 minute intervals to provide 1-hour average values and the station must be able to provide instantaneous wind speed and direction to assist in investigation of complaints.

The meteorological station shall also measure rainfall and evaporation. *(EPA GTA)*

Intermodal Facility Site

115. There shall be no offensive odour emitted from the premises, in accordance with Section 129 of the Protection of the Environment Act 1997. *(EPA GTA)*

Dust

Waste Management Facility Site

116. Activities occurring on the waste management facility site during the construction and operational phases must be carried out in a manner that will minimise emissions of dust from the premises. *(EPA GTA)*

117. The Applicant must take all practical steps to manage dust emissions during the construction and operational phase of the waste management facility to minimise off-site impacts of total suspended particulates, lead and dust deposition. *(EPA GTA)*

118. The LEMP must detail a system to prevent and suppress all dust emissions to meet the requirements in conditions 116 and 117. *(EPA GTA)*

119. Trucks which are entering and leaving the premises and carrying loads must be sealed or covered at all times, except during loading and unloading. *(EPA GTA)*

120. All internal permanent roadways between the container transfer area and Collector Road must be sealed. *(EPA GTA)*

121. All sealed surfaces intended to carry vehicular traffic must be managed to minimise the quantity of wind blown dust emissions. *(EPA GTA)*

122. All unsealed roads must be treated so that there are no visible dust emissions. Details of treatment measures must be documented in the LEMP.

123. A progressive rehabilitation strategy must be prepared and implemented for any unsealed areas of the site to prevent both wind blown dust emissions and contaminated stormwater runoff. This strategy must be documented in the LEMP. *(EPA GTA)*

Intermodal Facility Site

Construction and Operational Phases

124. Activities occurring at the premises must be carried out in a manner that will minimise emissions of dust from the premises. *(EPA GTA)*

125. The Applicant shall prepare a dust management plan that outlines measures to prevent wind blown dust. The dust management plan must be included as a component of the LEMP. The dust management plan must specify measures to prevent wind blown dust during the construction and operational phases.*(EPA GTA)*

126. Trucks entering and leaving the premises that are carrying excavated dusty materials including clays, sands and soils must be covered at all times, except during loading and unloading. *(EPA GTA)*

127. All sealed and unsealed surfaces shall be managed to minimise the quantity of wind blown dust emissions. *(EPA GTA)*

ENVIRONMENTAL MONITORING (EPA GTAs)

Waste Management Facility Site

Odour Monitoring

128. The Applicant must prepare and implement an odour monitoring plan. The plan must be developed in consultation with the EPA and documented in the LEMP.

Ambient Air Quality Monitoring

129. The Applicant must prepare and implement an ambient air quality-monitoring plan. The ambient air quality monitoring plan must be documented in the LEMP. The plan must address but may not necessarily be limited to the following:

    (a) Monitoring methodologies and standards;

    (b) Monitoring for concentrations of total suspended particulates (TSP), lead and dust deposition rates;

    (c) Locations where monitoring will be carried out;

    (d) Detailed monitoring cycle and the duration of each monitoring cycle; and

    (e) Reporting.

    Monitoring is to be carried out in accordance with *Approved Methods for the Sampling and Analysis of Air Pollutants* NSW December 1999, or other methods stipulated in the EPL.

Landfill Gas Monitoring

130. The Applicant must prepare and implement a system of monitoring surface and subsurface landfill gas concentrations. Details of the surface and subsurface landfill gas monitoring system must be documented in the LEMP.

    At a minimum, landfill gas shall be monitored for methane, carbon dioxide, and oxygen. The EPL may require other substances to be monitored.

Groundwater Monitoring

131. The Applicant shall prepare and implement a groundwater monitoring program that can detect groundwater flow and direction and any occurrence of groundwater pollution. The groundwater monitoring program must be documented in the LEMP.

    Note: The specific requirements of the monitoring program will be stipulated in the EPL.

    The program must include details on:

    (a) location of bore holes around the perimeter of the mine void and ED3– including the depth at which they are screened to enable access of groundwater;

    (b) monitoring the height of the groundwater table;

    (c) monitoring the groundwater gradient and to determine the direction of groundwater flow;

    (d) monitoring methodologies and standards to be employed;

(e) reporting and assessment of results;

(f) opportunities to integrate the monitoring program with other monitoring programs in the vicinity;

(g) the parameters and substances that are proposed to be monitored, including sampling and analysis frequencies; and

(h) groundwater height should be reported against water table contours around the site to assess any variation over time.

Note: The exploration drill holes around the perimeter of the void should be investigated as monitoring sites in the development of the groundwater monitoring program.

The EPA will require a more extensive listing of elements and compounds to be monitored for a period, prior to the landfilling of the first load of waste. The purpose of this program will be to establish a robust baseline of the quality of the groundwater. This comprehensive monitoring will then be required on an annual basis.

Surface Water Monitoring

132. The Applicant shall prepare and implement a surface water-monitoring program to monitor the environmental performance of the construction, operation and rehabilitation of the development on surface water. The surface water-monitoring program must be documented in the LEMP.

Note: The specific requirements of the monitoring program will be stipulated in the EPL.

The program must include details on:

(a) Monitoring locations including:

(i) Crisps Creek ;

(ii) Allianoyonyiga Creek;

(iii) ED3; and

(iv) rainwater collected in the mine void;

(b) monitoring methodologies and standards to be employed;

(c) monitoring frequency based on rainfall events and creek flow assessment;

(d) an assessment of the contribution of surface water pollution from the Woodlawn Waste Management Facility as distinct from the Woodlawn Mine site;

(e) the quantity of water relocated from the mine void into ED3;

(f) the quantity of water relocated from ED3 into the mine void;

(g) the chemical composition of liquids added to the landfilled waste;

(h) the quantity of water that reports to ED3 , including its sources;

(i) the quantity of water removed and/or discharged from ED3, including its destination;

(j) the total quantity of water contained in ED3;

(k) the parameters and substances that are proposed to be monitored, including sampling and analysis frequencies;

(l) reporting and assessment of results; and

(m) opportunities to integrate the monitoring program with other monitoring programs in the vicinity.

Notes: The EPA will require a broader range of elements and compounds to be monitored for a short period, prior to waste being received at the site. This comprehensive monitoring will then be required to be conducted on an annual basis.

The monitoring of ED3 will initially be at weekly intervals and will be reviewed 12 months after commencement of landfilling operations.

Leachate Monitoring

133. The Applicant shall prepare and implement a leachate quality and quantity monitoring program. The program must be documented in the LEMP.

Note: The specific requirements of the monitoring program will be stipulated in the EPL.

The program must include details on:

(a) monitoring locations;

(b) monitoring methodologies and standards to be employed;

(c) monitoring frequency

(d) the height of the saturation level in the waste;

(e) the parameters and substances which are proposed to be monitored (eg redox potential, metals); and

(f) reporting and assessment of results.

134. The Applicant shall notify the EPA as soon as practicable after becoming aware that the height of the saturation level in the waste is above the height of the groundwater table that surrounds the mine void.

Environmental Performance of the Bioreactor Landfill

135. A Bioreactor Performance Monitoring Program (BPMP) must be developed and implemented which will:

(a) assess the efficiency of the decomposition of the landfilled waste;

(b) assess the optimum leachate recirculation program;

(c) assess the optimum water injection program;

(d) assess the effect of the saturation depth of the leachate on bioreactor performance; and

(e) assess the quantity of methane and carbon dioxide (and the relative proportions) that are emitted by the biological decomposition of the landfilled waste;

The BPMP must also include monitoring of the quantity of rainwater that passively infiltrates into the landfilled waste, the quantity and chemical composition of water that is deliberately added to the landfilled waste, and the quantity of leachate in the landfilled waste.

The Bioreactor Performance Monitoring Program must be documented in the LEMP.

The specific requirements of the monitoring program will be stipulated in the EPL.

Noise Monitoring

136. Noise levels must be monitored to confirm performance and to assess compliance with Condition 99, A noise-monitoring program must be developed and implemented. The noise-monitoring program must be submitted to the EPA for review. The program must be documented in the LEMP.

The program must include details on:

(a) methodologies for noise monitoring;

(b) location of noise monitoring; and

(c) frequency of noise monitoring.

Geo-technical Stability

137. The geo-technical stability of the premises must be monitored in accordance with the recommendations of the report prepared by BFP Consultants P/L dated 17 December 1998, titled *Woodlawn Landfill – Geo-technical Study*. The monitoring program must be documented in the LEMP.

Reporting

138. The Applicant must provide an annual return to the EPA in relation to the development as required by any licence under the POEO Act 1997 in relation to the development. In the return, the Applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable. If load based fees apply to the activity the Applicant will be required to submit load-based fee calculation work-sheets with the return.

Intermodal Facility Site

Water Monitoring Program

139. A surface water-monitoring program must be developed and implemented. The program must include details on but need not necessarily be limited to the following:

(a) monitoring locations including:

(i) Crisps Creek ;

(ii) Mulwaree River; and

(iii) the bypass from the first flush structure(s);

(b) the monitoring methodologies and standards to be employed;

(c) monitoring frequency based on rainfall event and creek flow assessment;

(d) the quantity of water collected weekly in the first flush structure;

(e) reporting and assessment of results;

(f) the parameters and substances which are proposed to be monitored; and

(g) opportunities to integrate the monitoring program with other monitoring programs in the vicinity.

The monitoring program must be documented in the LEMP.

Note: The specific requirements of the monitoring program will be stipulated in the EPL.

Noise Monitoring

140. Noise levels must be monitored to confirm performance and to assess compliance with Conditions 100 and 101. A noise-monitoring program must be developed and implemented. The program must include details on:

(a) methodologies for noise monitoring;

(b) location of noise monitoring; and

(c) frequency of noise monitoring.

The monitoring program must be documented in the LEMP.

Note: The specific requirements of the monitoring program will be stipulated in the EPL.

ROADWORKS

141. Prior to the commencement of construction, the Applicant shall undertake and submit to Council a detailed pavement analysis on the affected sections of Main Road 268 (Bungendore Road) and Collector Road. The Applicant shall fund any necessary rehabilitation work identified in the pavement analysis.

142. The Applicant shall fund and provide on Main Road 268 (Bungendore Road) a minimum bitumen sealed width of 9.0 metres, incorporating marked fog lines and centre-line as well as any required bus stops.

Note: This has been agreed between Mulwaree Shire Council and the Applicant. It has been accepted there will be a 7.0m wide road with 1m shoulders either side of the road which will be primed and sealed only.

143. The intermodal facility access road shall be constructed in accordance with Auspec specifications and shall have a 7.0 metre wide sealed bitumen pavement for two way roads and 5.0 metres on one way roads.

144. In accordance with the "Mulwaree Section 94 Contributions Plan", the Applicant shall provide a financial contribution to Council towards extraordinary road damage accept as may be waived by Council. The contribution is to be paid quarterly in arrears.

Note: the above contribution is current at the time of consent and will be indexed at six monthly intervals in accordance with any increase in the Consumer Price Index (All Groups) Sydney following publication by the Australian Bureau of Statistics.

145. Prior to the commencement of landfilling operations, the Applicant shall fund and undertake to the satisfaction of Council and the Roads and Traffic Authority the following works:

(a) rehabilitation of the pavement at the intersection of Bungendore and Collector Roads;

(b) provision of a right turn bay at the intersection of Bungendore and Collector Roads for south-bound traffic turning into Collector Road;

(c) construction of a right turn bay on Bungendore Road for right-turning traffic into the Intermodal Facility. *(MSC GTA); and*

(d) paving of the following areas with an asphalt concrete overlay:

(i) intersection of the Intermodal access road and Main Road 268

(ii) intersection of Main Road 268 and the Collector Road

(iii) intersection of the Collector Road and the access road to the landfill site.

146. The access point to the Intermodal Facility at Bungendore Road shall be constructed to a design and standard to the Roads and Traffic Authority (RTA) and Council specifications and shall have a minimum sight distance of 225 metres in both directions. *(MSC GTA)*

147. The access point to the Waste Management Facility site at Collector Road shall be constructed to accommodate B-doubles. *(MSC GTA)*

148. The Applicant shall liaise with Council in relation to upgrading the existing warning signposting at the junction of Bungendore and Collector Roads to better inform through traffic of the side road junction and turning trucks. *(MSC GTA)*

LANDSCAPING AND VEGETATION MANAGEMENT

149. The Applicant shall prepare a Landscaping and Vegetation Management Plan for both the Waste Management Facility and Intermodal Facility sites. The Plan shall be prepared by a suitably qualified person and shall address, but not be limited to, the following matters:

    (a) details of likely vegetation loss, means to minimise such loss and additional tree planting to offset this loss;

    (b) proposed plant species; and

    (c) details on landscaping treatment at the intermodal facility site, with particular attention to minimising the visibility of the facility from residences and public vantage points.

150. The Plan shall be prepared to the satisfaction of the Director-General and Council and shall be submitted at least three months prior to the commencement of landfilling operations.

AGRICULTURAL RISKS

151. The Applicant shall prepare to the satisfaction of NSW Agriculture a contingency plan for agricultural risks in the event of an incident such as an accident during the transportation of waste from Sydney.

152. As part of the LEMP, the Applicant shall prepare a plan to manage pests, diseases, vermin, and declared noxious weeds. The plan shall also address measures to manage bird pests in order to minimise the risk of any transfer of contaminants from the waste management facility site to regional waterways and water supply reservoirs. The plan shall also address the recommendations of the report prepared by Kinsella Consulting entitled *"Potential for Transport of Pests and Diseases of Plants and Animals from North Sydney to Tarago in Municipal Wastes"*, dated February 1999 and included as Appendix L of the EIS. *(EPA GTA)*

FLORA AND FAUNA

Terrestrial Flora and Fauna

153. The Applicant shall consult with NPWS on measures to conserve the population of the vulnerable orchard (*Diuris aequalis* – Buttercup Doubletail) in retained natural woodland on land within the Woodlawn mine site that is subject to the DA or areas potentially affected by the operation of the waste management facility.

Aquatic Flora and Fauna

154. The Applicant shall consult NSW Fisheries prior to the commencement of any works (including, but not limited to channel realignment, dredging, reclamation, culverts, road crossings, pipelines and weirs) in or adjacent to aquatic habitats.

155. The Applicant shall undertake all practicable measures to maintain and, where possible, enhance existing habitat features in the Mulwaree River and Crisps Creek, including gravel beds, riffles, pools, snags and aquatic and riparian vegetation.

156. The Applicant shall, in consultation with NSW Fisheries, ensure that the bridge from the Intermodal Facility over Mulwaree River is designed so that fish passage, in-stream flow and stream bed continuity are maintained.

HERITAGE AND ARCHAEOLOGY

Aboriginal Heritage

Note: The Applicant has been given Consent to Destroy for sites Crisps Creek 1 and 2, Tarago, NSW under section 90 of the National Parks and Wildlife Act 1974. Artefacts from Crisp Creeks sites 1, 2 and 4 have been salvaged, in accordance with the conditions of NPWS Permit #SCHU 007l.

Non-Aboriginal Heritage

157. In the event that any items potentially of non-Aboriginal heritage significance are identified on the subject land during the carrying out of works, the Applicant shall arrange for a suitably qualified archaeologist to inspect the item/s, determine the level of significance of the item/s and advise on appropriate management measures.

CONTINGENCY PLANNING

Emergency Management Plan

158. In relation to activities, which in the event of a disruption to operations may result in significant pollution being emitted, the Applicant must:

    (a) conduct an assessment to determine the potential internal and external causes of disruption of operations at the premises;

    (b) determine how these disruptions would impact on operations; and

    (c) identify the pollution that would result due to the disruption of operations and what impact the pollution would have on the health of the community and the environment.

159. In relation to matters identified in Condition 158, as part of the LEMP, the Applicant must prepare an Emergency Management Plan. The Plan shall address, but not necessarily be limited to:

    (a) identification of threats to the environment and/or public health that could arise in relation to the construction and operation of Waste Management Facility and Intermodal Facility including the transportation of waste. These threats may include fire (waste transportation or within the landfill), overflow, dam failure, power or other utility failure, natural disaster etc;

    (b) identification of strategies to minimise and ameliorate the effects of any groundwater surface water pollution identified from the groundwater and surface water monitoring programs;

    (c) an estimate of the cost of implementation;

    (d) actions to effectively respond to the disruption of operations so the risk of pollution is minimised;

    (e) a communications strategy for alerting relevant agencies and the potentially affected community in the event of the disruption to operations leading to significant pollution; and

(f) ensuring that all relevant employees are familiar with the emergency management plan.

The Applicant should regularly review the adequacy of the plan obtaining expert advice as required.

Note: When developing this emergency plan, opportunities may exist to integrate with the Woodlawn Mine site emergency management plans.

COMPLAINTS PROCEDURES

160. Prior to the commencement of construction, the Applicant shall establish a free-call telephone line that operates 24 hours per day 7 days per week on which complaints about the subject development can be registered. The Applicants shall record details of all complaints received and actions taken in response to complaints in an up-to-date log book. The Applicants shall ensure that an initial response to complainants is provided within 24 hours and detailed response within 10 days of the complaint being lodged. The system must also be provided with a complaint verification procedure which correlates potential sources of odours with an operation or activity by assessing relevant meteorological data.

161. The complaints register shall be available for inspection upon request by the Director-General, EPA, DLWC, and the CLC.

ATTACHMENT A

GENERAL AND MANDATORY CONDITIONS FOR ALL EPA LICENCES

Administrative Conditions

The Applicant must, in the opinion of the EPA, be a fit and proper person to hold a licence under the POEO (POEO) Act 1997, having regard to the matters in S.83 of that Act.

Limit Conditions

Pollution of waters

Except as may be expressly provided by a licence under the POEO Act 1997 in relation to the development, Section 120 of the POEO Act 1997 must be complied with.

Operating Conditions

Activities must be carried out in a competent manner

Licensed activities must be carried out in a competent manner.

This includes:

(a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and

(b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

Maintenance of plant and equipment

All plant and equipment installed at the premises or used in connection with the licensed activity:

(a) must be maintained in a proper and efficient condition; and

(b) must be operated in a proper and efficient manner.

Waste

The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a licence under the POEO Act 1997.

This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence under the POEO Act 1997.

MONITORING AND RECORDING CONDITIONS

Testing Methods – Concentration Limits

Monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation areas must be done in accordance with:

- the Approved Methods Publication; or
- if there is no methodology required by the Approved Methods Publication or by the general terms of approval or in the licence under the POEO Act 1997 in relation to the development or the relevant load calculation protocol, a method approved by the EPA in writing before any tests are conducted,

unless otherwise expressly provided in the GTAs or Licence Conditions.

Monitoring records

The results of any monitoring required to be conducted by the EPA's general terms of approval (GTAs), or a licence under the POEO Act 1997, in relation to the development or in order to comply with the load calculation protocol must be recorded and retained as set out in GTAs or Licence Conditions.

All records required to be kept by the licence must be:

- in a legible form, or in a form that can readily be reduced to a legible form;
- kept for at least four years after the monitoring or event to which they relate took place; and
- produced in a legible form to any authorised officer of the EPA who asks to see them.

The following records must be kept in respect of any samples required to be collected: the date(s) on which the sample was taken;

- the time(s) at which the sample was collected;
- the point at which the sample was taken; and
- the name of the person who collected the sample.

Recording of pollution complaints

The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

The record must include details of the following:

(a) the date and time of the complaint;

(b) the method by which the complaint was made;

(c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;

(d) the nature of the complaint;

(e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and

(f) if no action was taken by the licensee, the reasons why no action was taken.

The record of a complaint must be kept for at least 4 years after the complaint was made.

The record must be produced to any authorised officer of the EPA who asks to see them.

Telephone complaints line

The licensee must operate a 24 hour telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

This condition does not apply until 3 months after this condition takes effect.

REPORTING CONDITIONS

The Applicant must provide an annual return to the EPA in relation to the development as required by any licence under the POEO Act 1997 in relation to the development. In the return the Applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable. If load based fees apply to the activity the Applicant will be required to submit load-based fee calculation work sheets with the return.

Annual Return documents

What documents must an Annual Return contain?

The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

(a) a Statement of Compliance; and

(b) a Monitoring and Complaints Summary.

A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

An Annual Return must be prepared in respect of each reporting, except as provided below.

Note: The term “reporting period” is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Where this licence is transferred from the licensee to a new licensee,

(a) the transferring licensee must prepare an annual return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and

(b) the new licensee must prepare an annual return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an annual return in respect of the period commencing on the first day of the reporting period and ending on:

(a) in relation to the surrender of a licence – the date when notice in writing of approval of the surrender is given; or

(b) in relation to the revocation of the licence – the date from which notice revoking the licence operates.

Deadline for Annual Return

The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

Licensee must retain copy of Annual Return

The licensee must retain a copy of the annual return supplied to the EPA for a period of at least 4 years after the annual return was due to be supplied to the EPA.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

(a) the licence holder; or

(b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

A person who has been given written approval to certify a Statement of Compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review this licence.

Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

The licensee must provide written details of the notification to the EPA within seven days of the date on which the incident occurred.

Written report

Where an authorised officer of the EPA suspects on reasonable grounds that:

(a) where this licence applies to premises, an event has occurred at the premises; or

(b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

The request may require a report which includes any or all of the following information:

(a) the cause, time and duration of the event;

(b) the type, volume and concentration of every pollutant discharged as a result of the event;

(c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; and

(d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;

(e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;

(f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event;

(g) any other relevant matters.

The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

GENERAL CONDITIONS

Copy of licence kept at the premises or on the vehicle or mobile plant.

A copy of this licence must be kept at the premises or on the vehicle or mobile plant to which the licence applies.

The licence must be produced to any authorised officer of the EPA who asks to see it.

The licence must be available for inspection by any employee or agent of the licensee working at the premises or operating the vehicle or mobile plant.

ATTACHMENT B

DEFINITIONS RELEVANT TO EPA LICENCES

In the EPA GTAs, except in so far as the context or subject matter otherwise indicates or requires:

"Applicant" means Collex Waste Management Pty Limited.

"*Approved"* means approved in writing by the EPA or as specified in a condition in a licence.

"*End of Mine Life Steering Committee"* means the steering committee formed from the MREMP process to oversee environmental issues relating to mine closure. The Committee consists of representatives from Denehurst P/L, Price Waterhouse Coopers P/L (Administrators Appointed), NSW Department of Mineral Resources, NSW Department of Land and Water Conservation, NSW Environment Protection Authority and Mulwaree Shire Council. *"EPA Tyre Disposal Specifications"* means the current approved EPA procedure for disposal of tyres. As at 31/8/99, this approved procedure is (for tyres less that 1.2 metres in diameter which originate in the Sydney Metropolitan area) shredding tyres into pieces which measure no more than 250 mm in any direction or removing the walls in tyres prior to disposal.

"Independent review" means a review that is undertaken by a suitably qualified Environmental Consultant of monitoring, reporting, testing and the environmental performance of a company in meeting Licence requirements.

"*landfill gas"* means the gas that is generated by the decomposition of waste.

"Landfill Guidelines" means the EPA's "Environmental Guidelines: *Solid Waste Landfills",* or as otherwise amended by the EPA

"Landfill site" means a waste facility used for the purposes of disposing of waste to land.

"*Leachate"* means the polluted liquid that is released by or has percolated through waste. Pollutants contained in leachate include dissolved and suspended solids, organic chemicals, and dissolved gases.

"L_{A10} T" means the sound pressure level (A weighted) that is exceeded for 10 percent of the observed time "T".

"LEMP" means landfill environment management plan.

"Licence" means an environment protection licence issued under the Protection of the Environment Operations Act 1997

"MREMP" means the Mining Rehabilitation Environmental Management Plan prepared by Denehurst P/L for the Woodlawn Mine site to meet mining lease requirements and overseen by the NSW Department of Mineral Resources.

"mg/L" means milligrams per litre

"*Offensive odour"* means odour:

(a) that, by reason of its strength, nature, duration, character or quality, or the time at which it is emitted, or any other circumstances:

  (i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or

  (ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or

(b) that is of a strength, nature, duration, character or quality prescribed by the regulations or that is emitted at a time, or in other circumstances, prescribed by the regulations.

It is a defence in proceedings against a person for an offence against this section if the person establishes that:

(a) the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of the licence directed at minimising the odour; or

(b) the person affected by the odour were a person engaged in the management or operation of the premises.

A person who contravenes this section is guilty of an offence.

"POEO" means the Protection of the Environment Operations Act 1997

"Putrescible waste" has the same meaning as in the *Waste Minimisation and Management Act 1995,* which is waste being food or animal matter (including dead animals or animal parts) or unstable or untreated biosolids.

":g" means micrograms

":g/m^3" means micrograms per cubic metre

":S/cm " means micro siemens per centimetre

"Void" means the former open-cut mine pit at the Woodlawn mine site.

"waste" includes:

(a) any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or

(b) any discarded, rejected, unwanted, surplus or abandoned substance, or

(c) any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery or purification by a separate operation from that which produced the substance, or

(d) any substance prescribed by the regulations to be waste for the purposes of the *Waste Minimisation and Management Act, 1995.*

A substance is not precluded from being waste for the purposes of the *Waste Minimisation and Management Act, 1995* merely because it can be reprocessed, re-used or recycled.

"Waste Guidelines" means the EPA's *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes*, or as otherwise amended by the EPA.

"Woodlawn Waste Management Facility" means the landfill (mine void), intermodal facility, evaporation dam 3 (ED3) and includes other areas of the Woodlawn Mine site subject to the Development Application.

"Woodlawn Mine site" means the area bounded by the Woodlawn Mine property boundary nominated in figure 6.1 of the EIS titled Topography of Landfill Site and Surrounding Area in Woodlawn Waste Management Facility EIS Volume 1-Main Report prepared by Woodward Clyde P/L dated February 1999.

Notice of Modification

Section 75W of the *Environmental Planning & Assessment Act 1979*

As delegate of the Minister for Planning, I modify the development consent referred to in Schedule 1, subject to the conditions in Schedule 2.

Ben Lusher
Acting Executive Director
Key Sites and Industry Assessments

Sydney 9 SEPTEMBER 2016

SCHEDULE 1

Development Consent:	DA 31-02-99 granted by the then Minister for Urban Affairs and Planning on 30 November 2000
For the following:	Woodlawn Waste Management Facility at 619 Collector Road Tarago, in the Goulburn Mulwaree and Palerang Local Government Areas
Applicant:	Veolia Environmental Services (Australia) Pty Ltd
Consent Authority:	Minister for Planning
The Land:	Lots **4**, 5-6 in DP830765, Lots 8-9 in DP534616, Lot 19 in DP827588, Lots 14, 25, 30, **33, 34, 69,** 70, 86, 88, 91, and 92 in DP754919, **Lot 1 DP 241092,** part of the land comprising Lot 10 in DP703260 and part of the land comprising Lot 3 in DP754894.
Modification:	**DA 31-02-99 MOD 2:** Modification for changing the site water and leachate management to allow the use of: • ED2 for the mine void storm water storage; and • ED3S for treated leachate storage.

SCHEDULE 2

The above approval is modified as follows:

(a) Schedule 2 – Abbreviations and Interpretation are amended by the insertion of the **bold and underlined** words / numbers and deletion of ~~struck-out~~ words/numbers in alphabetical order as follows:

The Department	The Department of ~~Urban Affairs and~~ Planning **and Environment**

~~The Director-General~~	~~The Director-General of the Department of Urban Affairs and Planning~~
~~DLWC~~	~~Department of Land and Water Conservation~~
DPI-Water	**Department of Primary Industries – Water**
ED2	**Evaporation Dam No.2, as referred to in MOD 2**
ED3N	**Evaporation Dam No.3 - North as referred to in MOD 2**
ED3S	**Evaporation Dam No.3 - South as referred to in MOD 2**
ED3S-S	**Evaporation Dam No.3 - South (southern lagoon) as referred to in Figure 1 (Appendix A)**
EPA	**Environment Protection Authority**
MOD 2	**Modification Application titled "*Woodlawn Bioreactor – Modification to surface water and leachate management*" prepared by Parsons Brinckerhoff and dated 11 December 2015 and Response to Submissions dated June 2016**
~~NPWS~~	~~National Parks and Wildlife Service~~
OEH	**Office of Environment and Heritage**
Secretary	**Secretary of the Department (or delegate)**
Water-NSW	**NSW Water Supplier**

Delete all references to Director-General and replace with Secretary.

Delete all references to DLWC and replace with DPI-Water.

Delete all references to NPWS and replace with OEH.

(b) Schedule 2 – Condition 1 is amended by the insertion of the bold and underlined words / numbers as follows:

GENERAL CONDITIONS

Adherence to Terms of DA and EIS

1. Development shall be carried out in accordance with:
   (a) DA No. 31-02-99;
   (b) the EIS prepared by Woodward-Clyde Pty Ltd, dated February 1999;
   (c) the EIS Supplementary Report prepared by Woodward-Clyde Pty Ltd, dated March 1999;
   (d) the Amended DA and accompanying information prepared by Woodward-Clyde, dated 12 November 1999,
   (e) Modification Application DA31-02-99 Mod1 and accompanying Environmental Assessment titled "*Modification to DA31-02-99 to Receive Regional Council Waste at the Woodlawn Bioreactor*", prepared by Veolia Environmental Services, dated February 2010 and the associated '*Response to Submissions*' prepared by Veolia Environmental Services dated 12 April 2010; and
   (f) Modification Application DA 31-02-99 MOD 2; and

   except as modified by the following conditions.

   In the event of an inconsistency between this consent and DA No. 31.02.99 (and accompanying EIS and other supporting documents), this consent shall prevail.

(c) Schedule 2 is amended by the insertion of the following new Condition 16A, after Condition 16 as shown in **bold and underlined** as follows:

Consultation with Tarago and District Progress Association Incorporated (TADPAI)

16A. The Applicant shall meet quarterly with TADPAI representatives and provide updated information on odour incidents, leachate management and gas extraction and resolution of incidents related to the local community.

(d) Schedule 2 – Condition 64 is amended by the insertion of the **bold and underlined** words / numbers as follows:

64. Stormwater in the mine void must only be discharged into ED3**S sump, for transfer via pipeline to ED2**, or otherwise used for operational purposes within the landfill, as approved in writing by the EPA. (EPA GTA)

(e) Schedule 2 – Condition 65 is amended by the insertion of the bold and underlined words / numbers and deletion of ~~struck out~~ words/numbers as follows:

65. Stormwater collected in the mine void may only be transferred into ED3**S sump and ED2** provided that:
    a) The Applicant can always comply with condition 58; **and**
    ~~b) the concentration of ammonia in the stormwater to be transferred does not exceed 0.03 mg/L, and the concentration of total organic carbon in the stormwater does not exceed 1 mg/L; and~~
    c) the stormwater to be transferred contains no leachate, unless otherwise approved in writing by the EPA. *(EPA GTA)*

(f) Schedule 2 – is amended by the insertion of the following new Condition 66A, after Condition 66 as shown in **bold and underlined** as follows:

66A. Within two months of the date of the approval of MOD 2 or as otherwise agreed by the Secretary, the Applicant shall submit a revised Stormwater Management Plan to the Secretary for approval. The plan shall be prepared in consultation with the EPA and include the changes to water management in MOD 2, in accordance with the requirements of Condition 66.

(g) Schedule 2 – is amended by the insertion of the following new Condition 66B, after Condition 66A as shown in **bold and underlined** as follows:

66B. Within two months of the date of the approval of MOD 2, or as otherwise agreed by the Secretary, the Applicant shall submit a revised Management Plan for ED3N, ED3S and ED3S-S to the Secretary for approval. The plan shall be prepared in consultation with the EPA and include the changes to water management in MOD 2, in accordance with the requirements of Condition 70.

(h) Schedule 2 – Condition 70 is amended by the insertion of the **bold and underlined** words / numbers and deletion of the ~~struck out~~ words/numbers as follows:

ED3**N, ED3S and ED3S-S** – Management

70. The Applicant must prepare a management plan for ED3**N, ED3S and ED3S-S** to ensure that:
    (a) ~~the~~ **each** dam is **lined and** maintained to prevent leakage ~~of~~ **from the dams** ~~acid mine drainage waters~~ in order to protect groundwater and surface water;

(b) **a monitoring and inspection program is implemented including installation of monitoring bores, a review of monitoring data and six-monthly inspections to evaluate the integrity of the barrier and to assess if leakage from the dam is occurring;**
(c) adequate capacity is retained in ED3**N and ED3S** to meet the environmental performance requirements in condition 58.
(d) measures are identified to maintain adequate capacity within a suitable time period after receiving water from a rainfall event;
(e) there is an emergency plan for the management of **leachate** ~~water~~ in excess of the capacity of ED3**N and ED3S**;
(f) the sources of **leachate** ~~water~~ that are collected or received in ED3**N and ED3S** are identified; and
(g) the quantity of **leachate** ~~water (in cubic metres per hour)~~ from each source that reports to ED3**N, and ED3S** is monitored and compared in graphical format with rainfall data.

An updated plan including MOD 2 ~~The plan~~ must be documented in the LEMP.

(i) Schedule 2 – is amended by the insertion of the following new Condition 70A, after Condition 70 as shown in **bold and underlined** as follows:

Treated Leachate Storage in ED3S-S

70A. The Applicant must confirm in writing to the EPA and the Secretary the dam lining is in place (in accordance with Condition 70), prior to the discharge of treated leachate into ED3S-S. From the commencement of MOD 2, the Applicant shall provide quarterly updates to the EPA and the Secretary of the leachate volume in ED3S-S (southern lagoon) and the remaining storage volume.

(j) Schedule 2 – is amended by the insertion of the following new Condition 70B, after Condition 70A as shown in **bold and underlined** as follows:

ED2 - Management

70B. The Applicant must prepare a management plan for ED2 to ensure that:
(a) only mine void stormwater that does not contain leachate and direct rainfall and runoff is received and stored within ED2;
(b) the dam is lined and maintained to prevent the leakage of stored acid mine drainage waters in order to protect groundwater and surface water;
(c) a monitoring and inspection program is implemented including installation of monitoring bores, a review of monitoring data and six-monthly inspections to evaluate the integrity of the barrier and to assess if leakage from the dam is occurring;
(d) adequate capacity is retained in ED2 to meet the environmental performance requirements in condition 58.
(e) measures are identified to maintain adequate capacity within a suitable time period after receiving water from a rainfall event;
(f) there is an emergency plan for the management of water in excess of the capacity of ED2;
(g) the sources of water that are collected or received in ED2 are identified; and
(h) the quantity of water from each source that reports to ED2 is monitored and compared in graphical format with rainfall data.

The plan must be prepared in consultation with the EPA and submitted to the Secretary for approval within two months of the date of approval for MOD 2 or as otherwise agreed by the Secretary. The revised plan shall be documented in the LEMP.

70C. Seepage or leakage points in ED2 must be identified and repaired to the satisfaction of the Secretary and EPA prior to the transfer of any stormwater from ED3S to ED2.

(k) Schedule 2 – is amended by the insertion of the following new Condition 70C, after Condition 70B as shown in **bold and underlined** as follows:

Long-term Leachate Management

70D. The Proponent must develop and implement a Longterm Leachate Management Strategy that:

- **Minimises the generation of leachate at the premises;**
- **Captures, treats and disposes of all leachate generated at the premises;**
- **Maintains leachate levels in the waste mass to a level that does not inhibit the efficiency of the landfill gas extraction system;**
- **Progressively removes all treated leachate from ED3; and**
- **Minimise the emission of offensive odours from leachate treated and stored onsite so that there is no off site impact.**

The Longterm Leachate Management Strategy must be submitted to the Secretary and the EPA (for inclusion as a Pollution Reduction Program attached to environment protection licence 11436) for approval within two months of the approval date of MOD 2.

70E. Treated leachate must not be discharged to any part of ED3S, other than ED3S-S, until such time as the Long Term Leachate Management Strategy has been approved by the Secretary and the EPA.

70F. The Longterm Leachate Management Strategy must be operational no later than 20 December 2017, or as otherwise agreed by the Secretary.

(l) Schedule 2 – Condition 132 is amended by the insertion of the **bold and underlined** words / numbers and deletion of ~~struck-out~~ words/numbers as follows:

Surface Water Monitoring

132. The Applicant shall prepare and implement a surface water-monitoring program to monitor the environmental performance of the construction, operation and rehabilitation of the development on surface water. The surface water-monitoring program must be documented in the LEMP.

Note: The specific requirements of the monitoring program will be stipulated in the EPL.

The program must include details on:

a. Monitoring locations including:
   i. Crisps Creek;
   ii. Allianoyonyiga Creek;
   iii. ED3**N**;

iv. **ED3S;**
v. **ED3S-S;**
vi. **ED2;**
vii. **Downstream receiving waters of ED2;**
viii. **Treated leachate effluent discharge line,**
ix. **Discharge line from ED3S to ED2, and**
x. rainwater collected in the mine void;

b. monitoring methodologies and standards to be employed;
c. monitoring frequency based on rainfall events and creek flow assessment;
d. an assessment of the contribution of surface water pollution from the Woodlawn Waste Management Facility as distinct from the Woodlawn Mine site;
e. the quantity of water relocated from the mine void into ED3;
f. the quantity of water relocated from ED3 into the mine void;
g. the chemical composition of liquids added to the landfilled waste;
h. the chemical composition of treated leachate in the effluent discharge line;
i. the chemical composition of leachate within ED3S-S;
j. the quantity of water that reports to ED3, including its sources;
k. the quantity of water removed and/or discharged from ED3, including its destination;
l. the total quantity of water contained in ED3;
m. the quantity of water transferred from ED3S into ED2;
n. the quantity of water that reports to ED2, including its sources;
o. the total quantity of water contained in ED2;
p. the parameters and substances that are proposed to be monitored, including sampling and analysis frequencies;
q. reporting and assessment of results; and
r. opportunities to integrate the monitoring program with other monitoring programs in the vicinity.

Notes: The EPA will require a broader range of elements and compounds to be monitored for a short period, prior to waste being received at the site. This comprehensive monitoring will then be required to be conducted on an annual basis.
The monitoring of ED3 will initially be at weekly intervals and will be reviewed 12 months after commencement of landfilling operations.

The Monitoring of ED2 will initially be at weekly intervals once the transfer of stormwater from ED3S to ED2 has commenced and will be reviewed 12 months after commencement of MOD 2.

(m) Schedule 2 – is amended by the insertion of the following new Condition 159A, after Condition 159 as shown in **bold and underlined** as follows:

159A. Within six months of the approval lapse date of MOD 2, or within such further period as the Secretary may agree, the Applicant shall prepare and submit a revised Emergency Management Plan to the Secretary for approval. The plan shall include the site changes in MOD 2, in accordance with the requirements of Condition 159.

(n) Schedule 2 – is amended by the insertion of the following new Condition 162, after Condition 161 as shown in **bold and underlined** as follows:

Complaints Handling Procedures

162. Within 2 months of the date of the approval of MOD 2, a complaints handling procedure must be submitted to the Secretary for approval. The procedure shall

be prepared in consultation with the Department, Goulburn-Mulwaree Council, the EPA and the Community Liaison Committee. The complaints handling procedure must include:

- **a formal complaint/incident reporting procedure;**
- **an investigation procedure; and**
- **a complaint resolution procedure.**

A report of the complaint and the response/action taken and timeframe required to resolve the complaint must be made publicly available on the Applicant's website within 7 days of a complaint being made. *Note: The level of detail contained in the report of the complaint shall be determined in consultation with the Department, Goulburn- Mulwaree Council, the EPA and the Community Liaison Committee.*

(o) Schedule 2 – is amended by the insertion of the following new Condition 163, after Condition 162 as shown in **bold and underlined** as follows:

163. The Applicant shall provide a report to the Secretary of the complaints received, the response/action taken and timeframe in accordance with Condition 162, on an annual basis which is to be submitted within the AEMR. The report shall include all the matters required within subsections of Condition 162.

(p) Schedule 2 – is amended by the insertion of the following new Condition 164, after Condition 163 as shown in **bold and underlined** as follows:

Access to Information

164. From the commencement of MOD 2, the Applicant shall make the following information publicly available on its website as is required by the consent:

a) a copy of all current statutory approvals;
b) a copy of the Environmental Management Plan required under this approval;
c) a copy of any Annual Environmental Management Report including monitoring results (over the last 5 years);
d) a copy of any Independent Environmental and Odour Audit, and the Applicant's response to the recommendations in any audit;
e) report of the complaints and the response/action taken to resolve the complaint as required by Condition 162;
f) a copy of the minutes of the Community Liaison Committee Meetings; and
g) any other matter required by the Director-General.

(q) Schedule 2 – is amended by the insertion of Appendix A – Figure 1 as shown in **bold and underlined** as follows:

Appendix A – Figure 1 Detail of Evaporation Dam 3 prepared by Veolia Environmental Services (Australia) Pty Ltd – Revision F dated 21 July 2016.

End of Modifications to DA 31-02-99

Modification of Minister's Approval

Section 75W of the *Environmental Planning and Assessment Act 1979*

As delegate for the Minister for Planning, under the Instrument of Delegation executed on 11 October 2017, I approve the modification of the Development Consent referred to in Schedule 1, subject to the conditions outlined in Schedule 2.

Chris Ritchie
Director
Industry Assessments

Sydney 22 DECEMBER 2017

SCHEDULE 1

Development Consent (DA 31-02-99), granted by the then Minister for Urban Affairs and Planning on 30 November 2000 for the Woodlawn Waste Management Facility at 619 Collector Road, Tarago, in the Goulburn Mulwaree and Palerang local government areas.

SCHEDULE 2

This consent is modified as follows:

In Schedule 2: Conditions of Development Consent

1. Insert the following definitions in alphabetical order:

Coffer Dam	means coffer dam in ED1 as referred to in MOD 3
ED1	Evaporation Dam No. 1 as referred to in MOD 3 (the unlined portion of ED1)
LTP	Leachate Treatment Plant as referred to in MOD 3
ML	Megalitres
MOD 3	Modification Application titled *Modification of DA 31-02-99 and MP10_0012 for the construction of a leachate treatment plant and associated infrastructure and changes to regional waste limits and operating hours prepared* by SG Haddad Advisory and CW Strategic Planning Services, dated May 2017 and Response to Submissions dated October 2017

2. Delete the definition for "Water NSW" and insert the following definition in alphabetical order:

Water NSW	NSW manager and protector of the Sydney Drinking Water Catchment

3. Delete Condition 1 and replace with the following:

Adherence to Terms of DA and EIS

1. The Development shall be carried out in accordance with:
   (a) DA No. 31-02-99;
   (b) the EIS prepared by Woodward-Clyde Pty Ltd, dated February 1999;
   (c) the EIS Supplementary Report prepared by Woodward-Clyde Pty Ltd, dated March 1999;
   (d) the Amended DA and accompanying information prepared by Woodward-Clyde, dated 12 November 1999;
   (e) Modification Application DA31-02-99 Mod1 and accompanying Environmental Assessment titled "*Modification to DA31-02-99 to Receive Regional Council Waste at the Woodlawn Bioreactor*", prepared by Veolia Environmental Services, dated February 2010 and the associated '*Response to Submissions*' prepared by Veolia Environmental Services dated 12 April 2010;
   (f) Modification Application DA 31-02-99 MOD 2; and
   (g) Modification Application DA 31-02-99 MOD 3.

4. Delete Condition 18 and replace with the following:

Conditions Compliance Reports

18. The Applicant shall submit to the Secretary, the EPA, DPI Water, Water NSW and Council Conditions Compliance Reports as follows:
   (a) at least one month prior to the commencement of construction works for the purposes of landfilling, or within such period as otherwise agreed to by the Secretary;
   (b) at least one month prior to the commencement of construction works for the purposes of the intermodal transfer facility, or within such period as otherwise agreed to by the Secretary;
   (c) every two years following the date of commencement of construction for the purposes of landfilling activity, or within such period as otherwise agreed to by the Secretary.

   Note: the requirements of (a) and (b) above may be satisfied by the same report if appropriate.

5. Delete Condition 19 and replace with the following:

Independent Environmental Audits

19. Every three years following the date of this consent, or at periods otherwise agreed to by the Secretary, and until such time as agreed to by the Secretary, the Applicant shall arrange for an independent audit of the environmental performance of the development. The audits shall:
   (a) be conducted pursuant to ISO 14010 – Guidelines and General Principles for Environmental Auditing, ISO 14011 – Procedures for Environmental Monitoring and any specifications of the Secretary;
   (b) be conducted by a suitably qualified independent person approved by the Secretary;
   (c) assess compliance with the requirements of this consent;
   (d) assess the implementation of the LEMPs and review the effectiveness of the environmental management of the development; and
   (e) be carried out at the Applicants' expense.

   The audits shall be submitted to the Secretary, the EPA, DPI Water, Water NSW, Council and the Community Liaison Committee.

   The Applicants shall comply with all reasonable requirements of the Secretary in respect of any measures arising from or recommended by the audits and within such time as agreed to be the Secretary.

6. Delete Condition 55 and replace with the following:

55. The Applicant shall prepare a Leachate Contingency Management Plan (LCMP) that addresses, but not necessarily be limited to the following matters:
   (a) the removal of leachate from the waste and its treatment to remove any metals or compounds at concentrations which may inhibit the biological processes of the bioreactor landfill, prior to discharging the leachate back into the landfilled waste;
   (b) the storage of leachate external to the landfilled waste in the mine void;

(c) method/s for removing leachate from the waste and disposing of it to ensure effective operation of the bioreactor landfill and to ensure that the groundwater gradient directs groundwater flows into the mine void;
(d) an estimate of the full costs for implementing each aspect of this plan *(EPA GTA)*;
(e) contingency measures in the event that the leachate storage dams reach capacity sooner than anticipated, this should include the provision for the construction and operation of additional lined coffer dams in ED1 to the satisfaction of the EPA; and
(f) contingency measures should the modelling as required by Condition 70G demonstrate that the dams will overflow.

7. Insert new conditions 55A and 55B immediately after Condition 55 as follows:

55A. Prior to operation of the LTP, or as otherwise agreed by the Secretary, the Applicant must submit a revised LCMP to the satisfaction of the Secretary. The LTP is not permitted to operate until the revised LCMP is approved by the Secretary. The plan must be prepared in consultation with the EPA and Water NSW and include contingency measures should the leachate dams fill sooner than anticipated.

55B. Should additional coffer dam(s) be required to be constructed as part of the LCMP the dam(s) must be designed constructed and maintained in accordance with Condition 70L to 70P.

8. Delete conditions 66A and 66B and replace with the following:

66A. Prior to the operation of the LTP or as otherwise agreed by the Secretary, the Applicant must submit a revised Stormwater Management Plan to the satisfaction of the Secretary. The plan must be prepared in consultation with the EPA and Water NSW and include the changes to stormwater management in MOD 2 and MOD 3, in accordance with the requirements of Condition 66.

66B. Prior to the operation of the LTP or as otherwise agreed by the Secretary, the Applicant must submit a revised Management Plan for ED3N, ED3S, ED3S-S and the Coffer Dam to the satisfaction of the Secretary. The LTP is not permitted to operate until the revised management plan is approved by the Secretary The plan must be prepared in consultation with the EPA and Water NSW and include the changes to water and leachate management in MOD 2 and MOD 3, in accordance with the requirements of Condition 70. The plan must be documented in the LEMP.

9. Insert new Condition 66C immediately after Condition 66B as follows:

66C. Should any additional coffer dams in ED1 be required, the Applicant must submit revised management plans in accordance with conditions 70 and 70B to the satisfaction of the Secretary prior to any treated leachate being discharged to the coffer dams. The plans must be prepared in consultation with the EPA and Water NSW and be documented in the LEMP.

10. Delete Condition 70 and replace with the following:

ED3N, ED3S and ED3S-S and Coffer Dam(s) – Management

70. The Applicant must prepare a management plan for ED3N, ED3S, ED3S-S and coffer dam(s), ED1, the LTP and pipeline to ensure that:
(a) each dam is lined in consultation with Water NSW and to the satisfaction of the EPA and maintained to prevent leakage from the dams in order to protect groundwater and surface water;
(b) a monitoring and inspection program is implemented including installation of monitoring bores, a review of monitoring data and six-monthly inspections to evaluate the integrity of the barrier and to assess if leakage from the dam is occurring;
(c) adequate capacity is retained in ED3N, ED3S and coffer dam(s) to meet the environmental performance requirements in condition 58;
(d) measures are identified to maintain adequate capacity within a suitable time period after receiving water from a rainfall event;
(e) there is an emergency plan for the management of leachate in excess of the capacity of ED3N, ED3S and coffer dam(s);
(f) the sources of leachate that are collected or received in ED3N, ED3S and coffer dam(s) are identified;
(g) the quantity of leachate from each source that reports to ED3 is monitored and compared in graphical format with rainfall data;
(h) ED3N is emptied of effluent from the existing leachate system by 31 December 2022;
(i) all pipelines which transfer leachate and treated leachate are monitored to ensure leaks do not occur;
(j) the operational details of the LTP include:

(i) the leachate quality targets;
(ii) a description of the performance indicators that would be used to judge the performance of the LTP;
(iii) a description of the management measures that would be implemented to manage the operational impacts of the LTP including the chemical storage area and sludge skip bin;
(iv) contingency measures to manage any unpredicted impacts such as the bioreactor membrane failing; and
(v) the roles, responsibility, authority and accountability of all key personnel involved in the environmental management of the LTP.

(k) An updated plan including MOD 2 and MOD 3 and must be documented in the LEMP.

11. Insert the following note after Condition 70C:

Note: Conditions pertaining to ED2 will be triggered only in the event of transfer of water from ED3S to ED2.

12. In Condition 70D, delete the word "Proponent" and replace with the word "Applicant".

13. Delete Condition 70F and replace with the following:

70F. The Long-term Leachate Management Strategy must be operational no later than 30 September 2018 or as otherwise agreed by the Secretary.

14. Insert the following new conditions after Condition 70F:

Future Modelling

70G. Prior to the operation of the LTP, the Applicant must provide modelling which demonstrates that the evaporation dams will not overflow for the period between 2029 to 2058. Should overflow be predicted, the Applicant must provide contingency measures in accordance with Condition 55A.

Leachate Treatment Plant

70H. The Applicant must construct the Leachate Treatment Plant (LTP) and associated infrastructure in accordance with the Construction Environment Management Plan prepared by Veolia dated 12 December 2017.

70I. All run-off during construction must be contained on the site in accordance with Condition 58.

70J. The LTP must be:
(a) capable of processing at least 4 litres per second of leachate; and
(b) bunded to contain 110 % of the facilities largest sized tank.

70K. The sludge skip bin must be bunded and covered to prevent contaminants entering surface water.

Coffer Dam(s)

70L. Treated leachate must not be discharged to any part of ED1, other than within lined coffer dam(s).

70M. The coffer dam(s) in ED1 must be designed and constructed:
(a) by a suitably qualified and experienced person(s);
(b) based on a geotechnical investigation and any recommendations prepared by a suitable qualified person(s); and
(c) ensuring that all coffer dams are lined with a High Density Polyethylene liner to the satisfaction of the EPA and in consultation with Water NSW.

70N. The Applicant must provide works-as-executed drawings signed by a registered surveyor demonstrating that the coffer dam(s) have been constructed in accordance with the design required by Condition 70M. The Applicant must submit the works-as-executed drawings to the EPA, Water NSW and Secretary prior to the discharge of treated leachate into the coffer dam(s).

70O. Prior to the discharge of treated leachate into any coffer dam(s) in ED1, the Applicant must confirm in writing and provide a quality assurance report to the EPA, Water NSW and the Secretary that the High Density Polyethylene dam lining has been adequately installed. From the commencement of discharge of treated leachate into the coffer dam(s), the Applicant shall provide quarterly updates to the EPA, Water NSW and the Secretary of the leachate volume in the coffer dam(s) and the remaining leachate storage volume.

70P. Prior to the discharge of treated leachate to any coffer dam(s), the Applicant must install a leak detection system which monitors flows along all pipelines which carry leachate. Any leaks must be investigated, contained and rectified.

70Q. Only treated leachate from the LTP is permitted to be stored within coffer dam(s) in ED1, unless otherwise agreed to by the Secretary.

70R. The coffer dam(s) are not permitted to exceed 80 per cent capacity until either:
(a) a new coffer dam has been designed and constructed in accordance with condition 70M to 70P and is ready to accept treated leachate from the LTP and a revised management plan has been submitted to the satisfaction of the Secretary in accordance with Condition 70; or
(b) sections of ED3N have been emptied of partially treated leachate, had its liner assessed and, if necessary, repaired, and is capable of receiving treated leachate from the LTP.

70S. No interaction between the treated leachate in the coffer dam(s) and the mine stormwater in ED1 is permitted.

70T. Within six months of commissioning the LTP and annually thereafter, unless otherwise agreed to by the Secretary, the Applicant shall commission and pay the full cost of an independent assessment of the leachate and water management system. This audit must be conducted by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Secretary. During the audit, this expert must:
(a) consult with the EPA, Water NSW and the Secretary;
(b) assess actual performance against the assumptions and predictions made in the project water balance prepared by WSP dated September 2017. This must include:
(i) actual versus predicted inputs and outputs into and out of each dam;
(ii) actual versus predicted mechanical evaporation from each dam;
(iii) actual versus predicted rainfall and evaporation; and
(iv) the actual versus predicted volume of water or treated leachate stored in each dam.
(c) assess actual versus predicted performance of the LTP. This must include:
(i) actual versus target effluent quality; and
(ii) actual versus target throughput.
(d) determine whether the leachate and water management system is achieving its intended objectives; and
(e) outline all reasonable and feasible measures that may be required to improve water and leachate management at the site.

ED1

70U. The volume of mine water stored in ED1 must be no more than 10 ML by 31 December 2023.

ED3N

70V. ED3N must be emptied of effluent from the existing leachate system by 31 December 2022.

70W. Prior to discharging treated leachate into sections of ED3N from the LTP, the Applicant must verify the integrity of the dam and prepare an integrity assessment of the ED3N liner to demonstrate the dam is not leaking and is suitable for the storage of treated leachate.

70X. Should the integrity assessment identified in Condition 70W find that the liner in ED3N is not adequate for treated leachate storage, the Applicant must submit management options to the Secretary, the EPA and Water NSW which will be adopted to rectify any integrity issues.

70Y. The Applicant must not store treated leachate from the LTP in ED3N until the Secretary and the EPA are satisfied that either ED3N is not leaking or the management options identified in Condition 70X are acceptable.

15. Delete Condition 131(a) and replace with the following:

(a) location of bore holes around the perimeter of the mine void, ED3 and the coffer dam(s) including the depth at which they are screened to enable access of groundwater;

16. Delete Condition 132 and replace with the following:

Surface Water Monitoring

132. The Applicant shall prepare and implement a surface water-monitoring program to monitor the environmental performance of the construction, operation and rehabilitation of the development on surface water. The surface water-monitoring program must be documented in the LEMP.

Note: The specific requirements of the monitoring program will be stipulated in the EPL.

The program must include details on:

(a) Monitoring locations including:
  (i) Crisps Creek;
  (ii) Allianoyonyiga Creek;
  (iii) coffer dam(s);
  (iv) ED1;
  (v) ED3N;
  (vi) ED3S;
  (vii) ED3S-S;
  (viii) ED2;
  (ix) Downstream receiving waters of ED2;
  (x) All treated leachate effluent discharge lines;
  (xi) Discharge line from ED3S to ED2;
  (xii) rainwater collected in the mine void;
(b) monitoring methodologies and standards to be employed;
(c) monitoring frequency based on rainfall events and creek flow assessment;
(d) an assessment of the contribution of surface water pollution from the Woodlawn Waste Management Facility as distinct from the Woodlawn Mine site;
(e) the quantity of water relocated from the mine void into ED3;
(f) the quantity of water relocated from ED3 into the mine void;
(g) the chemical composition of liquids added to the landfilled waste;
(h) the chemical composition of treated leachate in the effluent discharge line and the coffer dam;
(i) the chemical composition of leachate within ED3S-S;
(j) the quantity of water that reports to ED3, including its sources;
(k) the quantity of water removed and/or discharged from ED3, including its destination;
(l) the total quantity of water contained in ED3;
(m) the quantity of water transferred from ED3S into ED2;
(n) the quantity of water that reports to ED2 from Woodlawn Waste Management Facility, including its sources;
(o) the total quantity of water contained in ED2;
(p) the total quantity of treated leachate contained in the coffer dam(s);
(q) the total quantity of water contained in ED1;
(r) the parameters and substances that are proposed to be monitored, including sampling and analysis frequencies;
(s) reporting and assessment of results; and
(t) opportunities to integrate the monitoring program with other monitoring programs in the vicinity.

Notes: The EPA will require a broader range of elements and compounds to be monitored for a short period, prior to waste being received at the site. This comprehensive monitoring will then be required to be conducted on an annual basis.

The monitoring of ED3 will initially be at weekly intervals and will be reviewed 12 months after commencement of landfilling operations.

The Monitoring of ED2 will initially be at weekly intervals once the transfer of stormwater from ED3S to ED2 has commenced and will be reviewed 12 months after commencement of MOD 2.

Conditions pertaining to ED2 will be triggered only in the event of transfer of water from ED3S to ED2.

17. Delete conditions 159 and 159A and replace with the following:

159. In relation to matters identified in Condition 158, as part of the LEMP, the Applicant must prepare an Emergency Management Plan. The Plan shall address, but not necessarily be limited to:
(a) identification of threats to the environment and/or public health that could arise in relation to the construction and operation of Waste Management Facility and Intermodal Facility including the

transportation of waste. These threats may include fire (waste transportation or within the landfill), overflow, dam failure, power or other utility failure, natural disaster etc;

(b) identification of strategies to minimise and ameliorate the effects of any groundwater surface water pollution identified from the groundwater and surface water monitoring programs;
(c) an estimate of the cost of implementation;
(d) actions to effectively respond to the disruption of operations so the risk of pollution is minimised;
(e) a communications strategy for alerting relevant agencies and the potentially affected community in the event of the disruption to operations leading to significant pollution;
(f) ensuring that all relevant employees are familiar with the emergency management plan; and
(g) any chemical storage required to operate the LTP and be consistent with the Department of Planning and Environment's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'.

The Applicant should regularly review the adequacy of the plan obtaining expert advice as required.

Note: When developing this emergency plan, opportunities may exist to integrate with the Woodlawn Mine site emergency management plans.

159A. Prior to the operation of the LTP, or within such further period as the Secretary may agree, the Applicant shall prepare and submit a revised Emergency Management Plan to the Secretary for approval. The plan shall include the site changes in MOD 2 and MOD 3, in accordance with the requirements of Condition 159.

18. Insert new conditions 159B and 159C immediately after Condition 159A as follows:

Safety Management System

159B. A comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. Records from the Safety Management System must be kept on-site and must be available for inspection by the Secretary upon request. The Safety Management System shall be consistent with the Department of Planning and Environment's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.

Chemical Storage

159C. The Applicant must store all chemicals, fuels and oils used on-site in accordance with:
(a) the requirements of all relevant Australian Standards; and
(b) the NSW EPA's '*Storing and Handling of Liquids: Environmental Protection – Participants Handbook'* if the chemicals are liquids.

In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement must prevail to the extent of the inconsistency.

Modification of Minister's Approval

Section 75W of the *Environmental Planning and Assessment Act 1979*

As delegate for the Minister for Planning, under the Instrument of Delegation executed on 11 October 2017, I approve the modification of the Project Approval referred to in Schedule 1, subject to the conditions outlined in Schedule 2.

Chris Ritchie
Director
Industry Assessments

Sydney 22 DECEMBER 2017

SCHEDULE 1

Project Approval (MP 10_0012), granted by the Planning Assessment Commission on 16 March 2012 for the Woodlawn Waste Expansion Project at 619 Collector Road, Tarago, in the Goulburn Mulwaree and Palerang local government areas.

SCHEDULE 2

This approval is modified as follows:

1. Insert the following definitions in alphabetical order:

Coffer Dam	means coffer dam(s) in ED1 as referred to in MOD 3
ED1	Evaporation Dam No. 1 as referred to in MOD 3 (the unlined portion of ED1)
EPL	Environment Protection Licence
LTP	Leachate Treatment Plant
ML	Megalitre
MOD 2	Modification Application titled *Modification of DA 31-02-99 and MP10_0012 for the construction of a leachate treatment plant and associated infrastructure and changes to regional waste limits and operating hours prepared* by SG Haddad Advisory and CW Strategic Planning Services, dated May 2017 and Response to Submissions dated October 2017

2. Delete all references to "Water-NSW" and replace with "Water NSW".

3. Delete the definition of "Water NSW" and insert the following definition in alphabetical order:

Water NSW	NSW manager and protector of the Sydney Drinking Water Catchment

In Schedule 3: Administrative Conditions

4. Delete Condition 2 and replace with the following:

2. The Proponent shall carry out the Project generally in accordance with the:
   (a) EA;
   (b) statement of commitments (see Appendix 1);

(c) site layout plans and drawings in the EA (see Appendix 2);
(d) Modification Application MP 10_0012 MOD 1;
(e) Modification Application MP10_0012 MOD 2; and
(f) conditions of this approval.

5. Delete conditions 17 and 17A and replace with the following:

Soil and Water Management Plan

17. The Proponent shall prepare and implement a Soil & Water Management Plan for the Landfill to the satisfaction of the Secretary. This plan must:
(a) be prepared in consultation with EPA, Water NSW and DPI Water by a suitably qualified and experienced expert whose appointment has been endorsed by the Secretary;
(b) be approved by the Secretary prior to the commencement of expanded operations;
(c) must specifically consider soil and water management (including leachate management) at the Landfill and ED3N, ED3S, ED3S-S, ED2, coffer dam(s) and ED1;
(d) include a water balance for the project;
(e) include a surface water monitoring program;
(f) include a groundwater monitoring program; and
(g) ensure that suitable measures are implemented to minimise water use, control soil erosion, prevent groundwater contamination, and comply with any surface water discharge limits.

This plan must be documented in the Landfill EMP (see Condition 3 in Schedule 7).

17A. The Proponent shall update the Soil and Water Management Plan for the landfill by including the proposed changes to water and leachate management in MOD 1 and MOD 2. The Plan shall be prepared in accordance with the requirements of Condition 17, in consultation with Water NSW and the EPA and to the satisfaction of the Secretary. Prior to the operations of the LTP or as otherwise agreed by the Secretary, the Proponent must submit a Soil and Water Management Plan to the satisfaction of the Secretary.

6. Delete conditions 18 and 18A and replace with the following:

Leachate Management

18. The Proponent shall prepare and implement a Leachate Management Plan for the Landfill to the satisfaction of the Secretary. This plan must:
(a) be prepared in consultation with EPA, Water NSW and DPI Water by a suitably qualified and experienced expert whose appointment has been endorsed by the Secretary;
(b) be approved by Secretary prior to the commencement of expanded operations;
(c) describe in the detail the leachate barrier system installed on site;
(d) detail measures to collect and store all leachate generated by the landfill;
(e) detail measures to prevent leachate from escaping to surface water, groundwater or the surrounding subsoils;
(f) ensure all surface water from areas not subject to waste disposal or leachate disposal is directed away from the leachate management system;
(g) treat all water that has entered areas filled with waste, or been contaminated by leachate, as leachate;
(h) detail the management measures for the LTP, pipeline and coffer dam(s); and
(i) detail how the LTP would be managed during an emergency or system failure.

This plan must be documented in the Landfill EMP (see Condition 3 in Schedule 7).

18A. The Proponent shall update the Leachate Management Plan for the landfill by including the proposed changes to the leachate management in MOD 1 and MOD 2. The Plan shall be prepared in accordance with the requirements of Condition 18, in consultation with Water NSW and the EPA and to the satisfaction of the Secretary. Prior to the operation of the LTP or as otherwise agreed by the Secretary, the Proponent must submit a revised Leachate Management Plan to the satisfaction of the Secretary.

7. Insert the following new Condition 18AA after Condition 18A as follows:

Coffer Dam(s)

18AA. Should any additional coffer dams in ED1 be required, the Applicant must submit revised management plans in accordance with conditions 17 and 18 to the satisfaction of the Secretary prior to any treated

leachate being discharged to the coffer dams. The plans must be prepared in consultation with the EPA and Water NSW and be documented in the Landfill LEMP.

8. Delete Condition 18E and replace with the following:

18E. The Long-term Leachate Management Strategy must be operational no later than 30 September 2018 or as otherwise agreed by the Secretary.

9. Insert the following new conditions after Condition 18E:

Leachate Treatment Plant

18F. The Proponent must construct the Leachate Treatment Plant (LTP) and associated infrastructure in accordance with the Construction Environment Management Plan prepared by Veolia dated 12 December 2017.

18G. All run-off during construction must be contained on the site, no discharges off-site are permitted.

18H. The LTP must be:
(a) capable of processing at least 4 litres per second of leachate; and
(b) bunded to contain 110 % of the facilities largest sized tank.

18I. The sludge skip bin must be bunded and covered to prevent contaminants entering surface water.

Coffer Dam(s)

18J. Treated leachate must not be discharged to any part of ED1, other than within lined coffer dam(s).

18K. The coffer dam(s) in ED1 must be designed and constructed:
(a) by a suitably qualified and experienced person(s);
(b) based on a geotechnical investigation and any recommendations prepared by a suitable qualified person(s); and
(c) ensuring that all coffer dams are lined with a High Density Polyethylene liner to the satisfaction of the EPA and in consultation with Water NSW.

18L. The Proponent must provide works-as-executed drawings signed by a registered surveyor demonstrating that the coffer dam(s) have been constructed in accordance with the design required by Condition 18K. The Proponent must submit the works-as-executed drawings to the EPA, Water NSW and Secretary prior to the discharge of treated leachate into the coffer dam(s).

18M. Prior to the discharge of treated leachate into any coffer dam(s) in ED1, the Proponent must confirm in writing and provide a quality assurance report to the EPA, Water NSW and the Secretary that the High Density Polyethylene dam lining has been adequately installed. From the commencement of discharge of treated leachate into the coffer dam(s), the Proponent shall provide quarterly updates to the EPA, Water NSW and the Secretary of the leachate volume in the coffer dam(s) and the remaining leachate storage volume.

18N. Prior to the discharge of treated leachate to any coffer dam(s), the Proponent must install a leak detection system which monitors flows along all pipelines which carry leachate. Any leaks must be investigated, contained and rectified.

18O. Only treated leachate from the LTP is permitted to be stored within coffer dam(s) in ED1 unless otherwise agreed to by the Secretary.

18P. The coffer dam(s) are not permitted to exceed 80 per cent capacity until either:
(a) a new coffer dam has been designed and constructed in accordance with condition 18K to 18N and is ready to accept treated leachate from the LTP and a revised management plan has been submitted to the satisfaction of the Secretary in accordance with Condition 17 and 18; or
(b) sections of ED3N have been emptied of partially treated leachate, had its liner assessed and, if necessary, repaired, and is capable of receiving treated leachate from the LTP.

18Q. No interaction between the treated leachate in the coffer dam(s) and the mine stormwater in ED1 is permitted.

18R. Within six months of commissioning the LTP and annually thereafter, unless otherwise agreed to by the Secretary, the Proponent shall commission and pay the full cost of an independent assessment of the leachate and water management system. This audit must be conducted by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Secretary. During the audit, this expert must:
(a) consult with the EPA, Water NSW and the Secretary;

(b) assess actual performance against the assumptions and predictions made in the project water balance prepared by WSP dated September 2017. This must include:
  (i) actual versus predicted inputs and outputs into and out of each dam;
  (ii) actual versus predicted mechanical evaporation from each dam;
  (iii) actual versus predicted rainfall and evaporation; and
  (iv) the actual versus predicted volume of water or treated leachate stored in each dam.

(c) assess actual versus predicted performance of the LTP. This must include:
  (i) actual versus target effluent quality; and
  (ii) actual versus target throughput.

(d) determine whether the leachate and water management system is achieving its intended objectives; and

(e) outline all reasonable and feasible measures that may be required to improve water and leachate management at the site.

ED1

18S. The volume of mine water stored in ED1 must be no more than 10 ML by 31 December 2023.

ED3N

18T. ED3N must be emptied of effluent from the existing leachate system by 31 December 2022.

18U. Prior to discharging treated leachate into sections of ED3N from the LTP, the Proponent must verify the integrity of the dam and prepare an integrity assessment of the ED3N liner to demonstrate the dam is not leaking and is suitable for the storage of treated leachate.

18V. Should the integrity assessment identified in Condition 18U find that the liner in ED3N is not adequate for treated leachate storage, the Proponent must submit management options to the Secretary, Water NSW and the EPA which will be adopted to rectify any integrity issues.

18W. The Proponent must not store treated leachate from the LTP in ED3N until the Secretary and the EPA are satisfied that either ED3N is not leaking or the management options identified in Condition 18V are acceptable.

10. Delete Condition 20 and replace with the following:

20. The Proponent shall comply with the operating hours in Table 7 for the site, unless otherwise agreed in writing by the EPA.

Table 7: Operating Hours

Activity	Day	Hours
Construction	Monday - Friday	7 am – 6 pm
	Saturday	7 am – 1 pm
	Sunday & Public Holidays	Nil
Operations	Monday - Saturday	6am – 10 pm
	Sunday, Christmas Day and Good Friday	Nil

11. Delete Condition 25 and replace with the following:

FIRE AND EMERGENCY MANAGEMENT

25. The Proponent shall prepare and implement a Fire and Emergency Management Plan for the Landfill. This plan must:
(a) be prepared by a suitably qualified and experienced expert;
(b) be approved by the Secretary prior to the commencement of expanded operations;
(c) identify all threats to the environment and public health that could arise from the operation of the project (e.g. fire, overflow or dam failure);
(d) identify strategies to contain and minimise the effects of any threats to the environment and public health such as (but not limited to):
  (i) measures to minimise the risk of fire on site, including in the landfill area;
  (ii) actions to extinguish any fires on site promptly;
  (iii) measures to ensure adequate fire-fighting capacity on site, including a fire fighting tanker; and
(e) detail a communication strategy for notifying the relevant government agencies and potentially affected community in the event of an emergency; and

(f) address any chemical storage required to operate the LTP and be consistent with the Department of Planning and Environment's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'.

This plan must be documented in the Landfill EMP (see condition 3 in schedule 7). Prior to the operation of the LTP, the Fire and Emergency Management Plan must be revised and approved by the Secretary.

12. Insert new conditions 25A and 25B immediately after Condition 25 as follows:

Safety Management System

25A. A comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. Records from the Safety Management System must be kept on-site and must be available for inspection by the Secretary upon request. The Safety Management System shall be consistent with the Department of Planning and Environment's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.

Chemical Storage

25B. The Applicant must store all chemicals, fuels and oils used on-site in accordance with:

(a) the requirements of all relevant Australian Standards; and
(b) the NSW EPA's '*Storing and Handling of Liquids: Environmental Protection – Participants Handbook*' if the chemicals are liquids.

In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement must prevail to the extent of the inconsistency.

In Schedule 5: Specific Environmental Conditions – Crisps Creek IMF site

13. Delete Condition 17 and replace with the following:

17. The Proponent shall comply with the operating hours in Table 9 for the site, unless otherwise agreed in writing by the EPA.

Table 9: Operating Hours

Activity	Day	Hours
Construction	Monday - Friday	7 am – 6 pm
	Saturday	7 am – 1 pm
	Sunday & Public Holidays	Nil
Operations	Monday - Saturday	6am – 10 pm
	Sunday, Christmas Day and Good Friday	Nil

Appendix C - Operation Condition Compliance Report

Condition Compliance Report

For

Woodlawn Bioreactor

619 Collector Road, Tarago NSW 2580

Crisps Creek Intermodal Facility

Bungendore Road, Tarago NSW 2580

Document Code: PLA-NSW-XXX-XXX-1

Date: 24.07.2018

Veolia Australia and New Zealand
NSW Resource Recovery – Woodlawn Bioreactor
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Tel: 02 8588 1360

QUALITY INFORMATION

Document Revision Register

Rev	Revision Details	Prepared by	Review By	Date
0	Initial draft for internal review	Amandeep Brar, Environmental Planner	Stephen Bernhart NSW Resource Recovery Project Manager	13 April 2016
1	Final for submission to DPE	Amandeep Brar, Environmental Planner	Stephen Bernhart NSW Resource Recovery Project Manager	15 April 2016
2	Final Draft for submission to DPE	Harneet Puarr Woodlawn Environmental Officer	Amandeep Brar Environmental Planner	24 July 2018

TABLE OF CONTENTS

SECTION 1 INTRODUCTION

Veolia Australia and New Zealand (Veolia) owns the Woodlawn Eco Project Site (the Eco Project Site), which is located in the Southern Highlands of NSW, approximately 250 kilometres (km) South West of Sydney.

The Eco Project Site consists of two properties on approximately 6,000 hectares (ha) of land, namely Woodlawn and Pylara and includes the area of the Special (Crown & Private Lands) Lease 20 (SML 20), encompassing the Woodlawn Mine, a former lead, copper and zinc mine which ceased mining operations in 1998. The first stage of the Eco Project Site developed by Veolia was the Woodlawn Bioreactor (the Bioreactor), which commenced operations in September 2004 and is located in the void of the former Woodlawn Mine.

The Bioreactor has considerable capacity to receive putrescible waste generated from both Sydney and surrounding areas of regional NSW. On the basis of this, a modification application was sought by Veolia to remove the arbitrary annual waste input limits into the Bioreactor, and in response to the Wright Corporate Strategies' Public Review – Landfill Capacity and Demand (the Wright Review, 2009). The Wright Review was an independent review commissioned by the Minister for Planning to examine critical issues such as the continuing need for putrescible waste landfill capacity, regional disposal capacity and demand.

On 16 March 2012, the Department of Planning and Environment (DPE) granted approval for the Bioreactor to increase its annual maximum input rate from 500,000 tonnes per annum (TPA) to 1,130,000 TPA, referred to hereon as the expanded operations.

On 9 September 2016, DPE approved the long-term leachate management strategy (LTLM Strategy) for improving the extraction and treatment of leachate from the waste mass by installing a new membrane bioreactor (MBR) treatment plant to treat leachate at a faster rate and produce a much higher quality effluent.

Modifications (DA 31-02-99 MOD 3 and MP10_0012 MOD 2), approved on 22 December 2017, issued under section 75W of the Environmental Planning and Assessment Act 1979 (EP&A Act), details the construction and operation of a leachate treatment plant and associated infrastructure.

In addition, an Environment Protection License (EPL) 11436 has been issued by the Environment Protection Authority (EPA), under the *Protection of the Environmental Operations Act 1997* (POEO Act).

This Condition Compliance Report has been prepared to detail compliance with the provisions of the DP&I and Conditions of Consent for the Woodlawn Eco Project Site and the IMF Crisps Creek facility throughout its operation. This report presents each condition in tabular form and identifies where each condition has been addressed in the Landfill Environmental Management Plan (LEMP), its supplementary Environmental Management Plans and IMF Environment Management Plan

SECTION 2 CONDITIONS OF COMPLIANCE

2.1 Conditions of Project Approval 10_0012

Table 2.1 – Conditions of Project Approval 10_0012

Relevant Condition	Requirement	Management Plan Reference
SCHEDULE 1		
	Application no: **10_0012** **Proponent:** **Veolia Environmental Services Pty Ltd** **Approved Authority:** **Minister for Planning** **Land:** **Woodlawn Bioreactor site:** Lot 19 DP 827588, Lots 25, 30, 33, 34, 69, 88 & 91 DP 754919 Lot 4 and 5 DP830765 Lot 1 DP241092 **Crisps Creek Intermodal Facility:** Lot 1 DP 1045652 **Project:** **Woodlawn Waste Expansion Project**	*Noted*
SCHEDULE 3 – Administrative Conditions		
OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT		
1	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or decommissioning of the Project**.**	Noted
TERMS OF APPROVAL		

Relevant Condition	Requirement	Management Plan Reference
2	The Proponent shall carry out the Project generally in accordance with the: (a) EA; (b) statement of commitments (see Appendix 1); (c) site layout plans and drawings in the EA (see Appendix 2) (d) **Modification Application MP 10_0012 MOD1;** **(e) Modification Application MP 10_0012 MOD2; and** (f) conditionsof this approval.	Noted
3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.	Noted
4	The Applicant shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of: a) any reports, plans, strategies, programs or correspondence that are submitted in accordance with this Consent; and b) the implementation of any actions or measures contained in these reports, plans, strategies, programs or correspondence.	Noted
LIMITS OF APPROVAL		
Woodlawn Bioreactor		
5	The proponent shall not exceed the maximum annual input rates in Table 1 for the Landfill, unless otherwise agreed to by the Secretary in accordance with Condition 6 below. *Table 1 – Maximum waste input rates at the Landfill* **Putrescible waste received by rail from Sydney.** / **Received as residual waste from Woodlawn AWT** / **Putrescible regional waste received by road.** 900,000 TPA / 100,000 TPA / 50,000 TPA	Noted

<table>
<tr><th>Relevant Condition</th><th>Requirement</th><th>Management Plan Reference</th></tr>
<tr><td>6</td><td>Prior to the receipt of more than 50,000 TPA of regional waste by road at the Landfill, the Proponent shall obtain approval in writing from the Secretary to vary the limit for the receipt of regional waste not exceeding 130,000 TPA at the Landfill. Any such request must demonstrate to the satisfaction of the Secretary that the receipt of the additional regional waste from each LGA state or territory government:
would result in a net environmental benefit, including but not limited to:
the permanent closure of a smaller municipal landfill facility with poor environmental performance
is not inconsistent with and would not undermine any resource recovery strategy, target/s or initiative of the source local, state or territory government; and
would not significantly impact on the capacity of the Landfill and its primary purpose to accept waste from Sydney.</td><td>Noted</td></tr>
<tr><td>7</td><td>In any event, no more than 1.13 million TPA of waste shall be accepted at the Landfill.</td><td>Noted</td></tr>
<tr><td colspan="3">Crisps Creek IMF</td></tr>
<tr><td>8</td><td>The Proponent shall not exceed the annual throughput rates in Table 2 for the Crisps Creek IMF.

Table 2 – Maximum putrescible waste throughput rates at Crisps Creek IMF<table><tr><th>Received by rail from Sydney</th><th>Received by rail from Sydney for processing at the Woodlawn AWT</th></tr><tr><td>900,000 TPA</td><td>280,000 TPA</td></tr></table></td><td>Noted</td></tr>
<tr><td colspan="3">STRUCTURAL ADEQUACY</td></tr>
<tr><td>9</td><td>The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures are constructed in accordance with the relevant requirements of the BCA.</td><td>Noted</td></tr>
<tr><td colspan="3">TRANSITIONAL ARRANGEMENTS</td></tr>
<tr><td>10</td><td>This approval does not affect the rights or obligations under DA No. 31-02-99 except in the event of any inconsistency between DA No. 31-02-99 and this approval, this approval shall prevail.</td><td>Noted</td></tr>
</table>

Relevant Condition	Requirement	Management Plan Reference
11	The Proponent shall ensure that the receipt of waste at the Landfill is restricted to 500,000 TPA until all conditions of this approval relating to the commencement of expanded operations have been satisfied	Noted
12	All existing environmental management plans that apply to the site under DA No. 31-02-99 shall continue to be fully applied until replaced under this approval.	Noted
DEMOLITION		
13	The Proponent shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601:2001: The Demolition of Structures, or its latest version.	Noted
OPERATION OF PLANT AND EQUIPMENT		
14	The Proponent shall ensure that all plant and equipment used for the Project is: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	Noted
STAGED SUBMISSION OF PLANS OR PROGRAMS		
15	With the approval of the Secretary, the Proponent may submit any plan or program required by this approval on a progressive basis.	Noted
COMPLIANCE		
16	The Proponent must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedules 3, 4, 5 and 6. Any exceedance of these criteria and/or performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity: a) take all reasonable and feasible steps to bring the operation back into compliance; b) ensure that the exceedance does not recur; c) consider all reasonable and feasible options for remediation (where relevant) and how to prevent a recurrence and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and d) implement remediation and prevention measures as directed by the Secretary to the satisfaction of the Secretary.	Noted

Relevant Condition	Requirement	Management Plan Reference
SCHEDULE 4 – SPECIFIC ENVIRONMENTAL CONDITIONS – LANDFILL SITE		
WASTE MANAGEMENT		
Restrictions of the Receipt, Storage, Handling and Disposal of Waste		
1	The Proponent shall only receive waste on site that is authorised for receipt by an EPL.	Noted
Cover Material		
2	The Proponent shall ensure that all waste cover material used on site is virgin excavated natural material and/or alternative daily cover, as approved in writing by the OEH	Noted and addressed in Section 3.3.1.2 (Cover) of the Woodlawn Landfill Environment Management Plan (LEMP)
Litter Control		
3	The Proponent shall: a) implement suitable measures to prevent the unnecessary proliferation of litter both on and off site, including the installation and maintenance of a mesh fence of not less than 1.8 metres high around the landfill; and b) inspect daily and clear the site (and if necessary, surrounding area) of litter on at least a weekly basis.	Noted and addressed in Section 3.3.6.5 (Litter Control) of the LEMP
AIR		
Landfill Gas Limits		
4	The Proponent shall ensure that landfill gas engine (LGE) emissions at the Bioreactor comply with the requirements of the POEO (Clean Air) Regulation 2010.	Noted and addressed in the following sections of the Air Quality and Greenhouse Gas Management Plan (AQGGMP) Section 3.1.6 (Equipment Specifications), Section 3.2.4 (Engine Emissions Criteria), and; Section 5.1 (Monitoring Program)

Relevant Condition	Requirement	Management Plan Reference
Greenhouse Gas		
5	The Proponent shall implement all reasonable and feasible measures to minimise: a) energy use on site; and b) the greenhouse gas emissions produced on site, to the satisfaction of the Secretary.	Noted and addressed in Section 4.3 (Greenhouse Gas Control Measures) of the Noted and addressed in Section 4.3 of the AQGGMP
Odour		
Discharge Limits		
6	The Proponent shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act**.**	Noted and addressed in Sections 3.2.1 (Air Quality Criteria),and 3.2.2 (Odour Emissions Criteria) of the AQGGMP
Independent Odour Audit		
7	Within 3 months of the date of this project approval, and annually thereafter, unless otherwise agreed to by the Secretary pursuant to Condition 8 of this Schedule, the Proponent shall commission and pay the full cost of an Independent Odour Audit of the project. This audit must be conducted by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Secretary. During the audit, this expert must: a) consult with OEH and the Department; b) audit the effectiveness of the odour controls on site in regard to protecting receivers against offensive odour; c) review the Proponent's production data (that are relevant to the odour audit) and complaint records; d) review the relevant odour sections of the Air Quality and Greenhouse Gas Management Plan for the project and assess the effectiveness of the odour controls; e) measure all key odour sources on site including: i. consideration of wet weather conditions providing all raw sampling data used in this analysis; ii. consideration of (but not limited to) all liquid storage areas, active tipping faces, waste cover area, aged waste areas and recirculation of leachate onto waste in the void; and iii. a comparison of the results of these measurements against the predictions in the EA; f) determine whether the project is complying with the requirements in this approval to protect receivers against offensive odour; g) outline all reasonable and feasible measures (including a cost/benefit analysis, if required) that may be required to improve odour control at the site; and h) recommend and prioritise (mandatory and non-mandatory) recommendations for their implementation.	Noted and addressed in Section 3.1.1 (Odour) of the AQGGMP

<table>
<tr><th>Relevant Condition</th><th>Requirement</th><th>Management Plan Reference</th></tr>
<tr><td>8</td><td>The Secretary may vary the frequency of the audit after 5 years depending on the performance of the project and demonstrated compliance with Condition 6 of Schedule 4. This condition is linked to condition 9 in Schedule 5.</td><td>Noted</td></tr>
<tr><td>9</td><td>Within 6 weeks of the completion of an odour audit, the Proponent shall submit a copy of the audit report to both OEH and the Department with a response to any recommendations contained in the audit report.</td><td>Noted</td></tr>
<tr><td>10</td><td>Unless otherwise directed by the Secretary, the Proponent shall implement all the mandatory odour controls and recommendations of any Independent Odour Audit/s. Recommendations of the preceding Independent Odour Audit/s required under this approval shall be implemented prior to the commencement of expanded operations.
This audit must be documented in the Landfill EMP (see condition 3 in schedule 7).</td><td>Noted and addressed in Sections 3.1.1 (Odour), and, 4.1 (Odour control Measures) of the AQGGMP</td></tr>
<tr><td colspan="3">Dust Limits</td></tr>
<tr><td>11</td><td>The Proponent shall ensure that dust generated by the project does not exceed the criteria listed in Tables 3 to 5 at any private residential receiver, or on more than 25 percent of any privately owned land surrounding the site.
Table 3 – Long term criteria for particulate matter
<table>
<tr><th>Pollutant</th><th>Averaging period</th><th>[d]Criterion</th></tr>
<tr><td>Total suspended particulate (TSP matter)</td><td>Annual</td><td>[a]90 µg/m^3</td></tr>
<tr><td>Particulate matter < 10 µg (PM_{10})</td><td>Annual</td><td>[a]30 µg/m^3</td></tr>
</table>
Table 4 – Short term criteria for particular matter
<table>
<tr><th>Pollutant</th><th>Averaging period</th><th>[d]Criterion</th></tr>
<tr><td>Particulate matter < 10 µg (PM_{10})</td><td>24 hour</td><td>[a]50 µg/m^3</td></tr>
</table>
Table 5 – Long term criteria for deposited dust
<table>
<tr><th>Pollutant</th><th>Averaging period</th><th>Maximum increase in deposited dust level</th><th>[d]Criterion</th></tr>
<tr><td>[c]Deposited dust</td><td>Annual</td><td>[b]2 g/m^2/month</td><td>[a]4 g/m^2/month</td></tr>
</table></td><td>Noted and addressed in Section 5.2 (Performance Reporting and Review) of the AQGGMP</td></tr>
</table>

Relevant Condition	Requirement	Management Plan Reference
Air Quality Monitoring, Management and Validation		
12	The Proponent shall prepare and implement an Air Quality and Greenhouse Gas Management Plan for the Landfill to the satisfaction of the Secretary. This plan must: a) be prepared in consultation with OEH by a suitably qualified and experienced expert whose appointment has been endorsed by the Secretary; b) be approved by the Secretary prior to the commencement of expanded operations; c) describe in detail the measures that would be implemented on site to manage the air quality (particularly odour) and greenhouse gas impacts of the project to ensure compliance with this approval and other relevant statutory controls; d) include a program for monitoring the air quality impacts of the project, in particular: • LGE specifications and monitoring of LGE emissions against the requirements of the POEO (Clean Air) Regulation 2010 including measures that would be taken to ensure compliance with this regulation; e) be revised to consider mandatory odour controls and recommendations of any Independent Odour Audit required by this approval; and f) detail the remedial actions to be taken in the event that a non-compliance is identified. This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).	Noted and addressed in the following sections of the AQGGMP as outlined; a) Section 1.4.1 b) Noted c) Sections 4.1, 4.2 & 4.3 d) Section 5.1 e) Sections 3.1.1, 3.2.4 & 5.1 f) Sections 3.1.1 & 4.2 Section 5.3.1
SOIL AND WATER		
Pollution of Waters		
13	Except as may be expressly provided in the EPL for the site, the Proponent shall comply with Section 120 of the POEO Act	Noted and addressed in the following sections of the Soil and Water Management Plan (SWMP); Section 1.3.4 Section 3, and; Section 4 Also noted and addressed in Section 1.3.4 of Leachate Management Plan(LMP)

Relevant Condition	Requirement	Management Plan Reference
Soil		
14	The Proponent shall: a) minimise any soil loss through erosion on site; b) where possible, set aside any topsoil won on site for the proposed revegetation and rehabilitation of the site; and c) ensure that any topsoil stockpiles on site are suitably managed to ensure that the topsoil in these stockpiles can be beneficially used in the proposed revegetation and rehabilitation of the site.	Noted and addressed in Section 4.1.1 of the SWMP
Bunding		
15	The Proponent shall store all chemicals, fuels and oils used on site in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund, unless double-skinned tanks are used. Any bunds shall be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or OEH's Environmental Protection Manual: *Technical Bulletin Bunding and Spill Management.*	Noted and addressed in Section 4.2.6 of the SWMP
Erosion and Sediment Control		
16	During the construction, the Proponent shall implement suitable erosion and sediment control measures on site, in accordance with the relevant requirements in the latest version of the Managing Urban Stormwater: Soils and Construction guideline.	Noted and addressed in Section 4.1 of the SWMP
Soil and Water Management Plan		

Relevant Condition	Requirement	Management Plan Reference
17	The Proponent shall prepare and implement a Soil & Water Management Plan for the Landfill to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with **EPA, Water NSW and DPI Water** by a suitably qualified and experienced expert whose appointment has been endorsed by the **Secretary**; (b) be approved by the Secretary prior to the commencement of expanded operations; (c) must specifically consider soil and water management (including leachate management) at the Landfill and **ED3N, EDS3, ED3S-S, ED2, coffer dam(s) and ED1**; (d) include a water balance for the project; (e) include a surface water monitoring program; (f) include a groundwater monitoring program; and (g) ensure that suitable measures are implemented to minimise water use, control soil erosion, prevent groundwater contamination, and comply with any surface water discharge limits. This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).	Addresses Condition 131 of the DA-31-02-99 Noted and addressed in the following sections of the SWMP as outlined below: (a) Noted (b) Noted (c) Sections 3.1.7, 3.1.9 & 4.1 (d) Section 3.1.19 (e) Section 5.1.1 (f) Section 5.1.2 (g) Section 4
17A	The Proponent shall update the Soil and Water Management Plan for the landfill by including the proposed changes to water and leachate management in MOD 1 and MOD 2. The Plan shall be prepared in accordance with the requirements of Condition 17, in consultation with Water NSW and the EPA to the satisfaction of the Secretary. Prior to the operations of the LTP or as otherwise agreed by the Secretary, the Proponent must submit a Soil and Water Management Plan to the satisfaction of the Secretary.	Noted and revised SMP submitted 9 November 2016
Leachate Management		

Relevant Condition	Requirement	Management Plan Reference
18	The Proponent shall prepare and implement a Leachate Management Plan for the Landfill to the satisfaction of the Secretary. This plan must: a) be prepared in consultation with **EPA, Water NSW and DPI Water**by a suitably qualified and experienced expert whose appointment has been endorsed by the Secretary; b) be approved by Secretary prior to the commencement of expanded operations; c) describe in the detail the leachate barrier system installed on site; d) detail measures to collect and store all leachate generated by the landfill; e) detail measures to prevent leachate from escaping to surface water, groundwater or the surrounding subsoils; f) ensure all surface water from areas not subject to waste disposal or leachate disposal is directed away from the leachate management system; g) treat all water that has entered areas filled with waste, or been contaminated by leachate, as leachate; h) detail the management measures for the LTP, pipeline and coffer dam(s); and i) detail how the LTP would be managed during an emergency or system failure. This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).	Addresses Conditions 51, 52, 53 & 132 of the DA-31-02-99 Noted and addressed in the following sections of the LMP as outlined below: a) Noted b) Noted c) Section 4.1.1 d) Section 3.1.3 e) Sections 4.1.1 f) Sections 4.1.4 g) Section 4.2.4 of SWMP h) Section 4.2 and 4.3 i) Section 3.1.2.1 and refer to ERP
18A	The Proponent shall update the Leachate Management Plan for the landfill by including the proposed changes to the leachate management in MOD 1 and MOD 2. The Plan shall be prepared in accordance with the requirements of Condition 18, in consultation with Water NSW and the EPA and to the satisfaction of the Secretary. Prior to the operation of the LTP or as otherwise agreed by the Secretary, the Proponent must submit a revised Leachate Management Plan to the satisfaction of the Secretary.	Noted
Coffer Dam(s)		

Relevant Condition	Requirement	Management Plan Reference
18AA	Should any additional coffer dam in ED1 be required, the Applicant must submit revised management plans in accordance with conditions 17 and 18 to the satisfaction of the Secretary prior to any treated leachate being discharged to the coffer dams. The plans must be prepared in consultation with the EPA and Water NSW and be documented in the Landfill LEMP.	Noted
Long-term Leachate Management		
18B	The Proponent must develop and implement a Longterm Leachate Management Strategy that; • Minimises the generation of leachate at the premises; • Captures, treats and disposes of all leachate generated at the premises; • Maintains leachate levels in the waste mass to a level that does not inhibit the efficiency of the landfill gas extraction system; • Progressively removes all treated leachate from ED3; and • Minimise the emission of offensive odours from leachate treated and stored onsite so there is no office impact. The Longterm Leachate Management Strategy must be submitted to the Secretary and the EPA (for inclusion as a Pollution Reduction Program attached to environmental protection license 11436) for approval within two months of the approval date of MOD 1.	Noted
18C	Treated leachate must not be discharged to any part of ED3S, other than ED3S-S, until such time as the Long Term Leachate Management Strategy has been approval by the Secretary and the EPA.	Noted and addressed in Section 3.1.3of the LMP.
18D	Seepage or leakage points in ED2 must be identified and repairs to the satisfaction of the Secretary and EPA prior to the transfer of any stormwater from ED3S to ED2.	Noted and addressed in Section 3.1.7.2 of the SWMP
18E	The Longterm Leachate Management Strategy must be operational no later than 30 September 2018 or as otherwise agreed by the Secretary.	Noted
Leachate Treatment Plant		
18F	The proponent must construct the Leachate Treament Plant (LTP) and associated infrastructure in accordance with the Construction Environment Management Plan prepared by Veolia dated 12 December 2017.	Noted
18G	All run-off during construction must be contained on the site, no discharges off-site are permitted.	Noted

Relevant Condition	Requirement	Management Plan Reference
18H	The LTP must be: (a) capable of processing at least 4 litres per second of leachate; and (b) bunded to contain 110% of the facilities largest sized tank.	Noted and addressed in Section 3.1.2.1 and 4.2 of the LMP
18I	The sludge skip bin must be bunded and covered to prevent contaminants entering surface water.	Addressed in Section 4.2 of the LMP
Coffer Dam(s)		
18J	Treated Leachate must not be discharged to any part of ED1, other than within lined coffer dam(s).	Noted and addressed in section 3.1.2.1 and 3.1.3 of the LMP
18K	The coffer dam(s) in ED1 must be designed and constructed: (a) by a suitably qualified and experienced person(s); (b) based on a geotechnical investigation and any recommendations prepared by a suitable qualified person(s); and (c) ensuring that all coffer dams are lined with a High Density Polyethylene liner to the satisfaction of the EPA and in consultation with Water NSW.	Noted
18L	The proponent must provide works-as-executed drawings signed by a registered surveyor demonstrating that the coffer dam(s) have been constructed in accordance with the design required by Condition 18K. The proponent must submit the works-as-executed drawings to the EPA, Water NSW and Secretary prior to the discharge of treated leachate into the coffer dam(s).	Noted
18M	Prior to the discharge of treated leachate into any coffer dam(s) in ED1, the Proponent must confirm in writing and provide a quality assurance report to the EPA, Water NSW and the Secretary that the High Density Polyethylene dam lining has been adequately installed. From the commencement of discharge of treated leachate into the coffer dam(s), the Proponent shall provide quarterly updates to the EPA, Water NSW and the Secretary of the leachate volume in the coffer dam(s) and the remaining leachate storage volume.	Noted
18N	Prior to the discharge of treated leachate to any coffer dam(s), the Proponent must install a leak detection system which monitors flows along all pipelines which carry leachate. Any leaks must be investigated, contained and rectified.	Noted
18O	Only treated leachate from the LTP is permitted to be stored within coffer dam(s) in ED1 unless otherwise agreed to by the Secretary.	Noted and addressed in Section 3.1.3 of the LMP

Relevant Condition	Requirement	Management Plan Reference
18P	The coffer dam(s) are not permitted to exceed 80 per cent capacity until either: (a) a new coffer dam has been designed and constructed in accordance with condition 18K to 18N and is ready to accept treated leachate from the LTP and a revised management plan has been submitted to the satisfaction of the Secretary in accordance with Condition 17 and 18; or (b) sections of ED3N have been emptied of partially treated leachate, had its liner assessed and, if necessary, repaired, and is capable of receiving treated leachate from the LTP.	Noted and addressed in Section 4.3.1 in the LMP
18Q	No interaction between the treated leachate in the coffer dam(s) and the mine stormwater in ED1 is permitted.	Addressed in section 3.1.8 of SWMP
18R	Within six months of commissioning the LTP and annually thereafter, unless otherwise agreed to by the Secretary, the Proponent shall commission and pay the full cost of an independent assessment of the leachate and water management system. This audit must be conducted by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Secretary. During the audit, this expert must: (a) consult with the EPA, Water NSW and the Secretary; (b) assess actual performance against the assumptions and predictions made in the project water balance prepared by WSP dated September 2017. This must include: (i) actual versus predicted inputs and outputs into and out of each dam; (ii) actual versus predicted mechanical evaporation from each dam; (iii) actual versus predicted rainfall and evaporation; and (iv) the actual versus predicted volume of water or treated leachate stored in each dam. (c) assess actual versus predicted performance of the LTP. This must include: (i) actual versus target effluent quality; and (ii) actual versus target throughput. (d) determine whether the leachate and water management system is achieving its intended objectives; and (e) outline all reasonable and feasible measures that may be required to improve water and leachate management at the site.	Addressed in section 5.2 of LMP and section 5.1.3 of LEMP

<table>
<tr><th>Relevant Condition</th><th>Requirement</th><th>Management Plan Reference</th></tr>
<tr><td colspan="3">ED1</td></tr>
<tr><td>18S</td><td>The volume of mine water stored in ED1 must be no more than 10ML by 31 December 2023.</td><td>Noted</td></tr>
<tr><td colspan="3">ED3N</td></tr>
<tr><td>18T</td><td>ED3N must be emptied of effluent from the existing leachate system by 31 December 2022.</td><td>Noted and addressed in Section 3.1.3 in the LMP</td></tr>
<tr><td>18U</td><td>Prior to discharging treated leachate into sections of ED3N from the LTP, the Proponent must verify the integrity of the dam and prepare an integrity assessment of the ED3N liner to demonstrate the dam is not leaking and is suitable for the storage of treated leachate.</td><td>Noted</td></tr>
<tr><td>18V</td><td>Should the integrity assessment identified in Condition 18U find that the liner in ED3N is not adequate for treated leachate storage, the Proponent must submit management options to the Secretary, Water NSW and the EPA which will be adopted to rectify any integrity issues.</td><td>Noted</td></tr>
<tr><td>18W</td><td>The Proponent must not store treated leachate from the LTP in ED3N until the Secretary and the EPA are satisfied that either ED3N is not leaking or the management options identified in Condition 18V are acceptable.</td><td>Noted</td></tr>
<tr><td colspan="3">NOISE</td></tr>
<tr><td colspan="3">Limits</td></tr>
<tr><td>19</td><td>The Proponent shall ensure that the noise generated by the operations on-site does not exceed the limits in Table 6 at any private residential receiver.
Table 6 – Noise impact assessment criteria dB(A)
<table>
<tr><th rowspan="2">Receiver</th><th>6am – 10pm</th><th colspan="2">10pm – 6am</th></tr>
<tr><th>$L_{Aeq(15\ minute)}$</th><th>$L_{Aeq(15\ minute)}$</th><th>L_{Amax}</th></tr>
<tr><td>Any private residential receiver</td><td>35</td><td>35</td><td>45</td></tr>
</table></td><td>Addresses Condition 99 of the DA-31-02-99

Noted and addressed in Section 2.1 of the Noise Monitoring and Management Plan (NMMP)</td></tr>
<tr><td colspan="3">Operating Hours</td></tr>
</table>

<table>
<tr><th>Relevant Condition</th><th>Requirement</th><th>Management Plan Reference</th></tr>
<tr><td>20</td><td>The Proponent shall comply with the operating hours in Table 7 for the site, unless otherwise agreed in writing by the EPA.

Table 7 – Operating Hours
<table>
<tr><th>Activity</th><th>Day</th><th>Hours</th></tr>
<tr><td rowspan="3">Construction</td><td>Monday – Friday</td><td>7am – 6pm</td></tr>
<tr><td>Saturday</td><td>7am – 1pm</td></tr>
<tr><td>Sunday & Public Holidays</td><td>Nil</td></tr>
<tr><td rowspan="2">Operations</td><td>Monday – Saturday</td><td>6am – 10pm</td></tr>
<tr><td>Sunday, Christmas Day and Good Friday</td><td>Nil</td></tr>
</table></td><td>Addresses Condition 97 and 98 of the DA-31-02-99

Noted and addressed in Section 3.1 of the NMMP</td></tr>
<tr><td colspan="3">Monitoring and Management</td></tr>
<tr><td>21</td><td>The Proponent shall prepare and implement a Noise Monitoring and Management Plan for the Landfill to the satisfaction of the Secretary. This Plan must:
(a) be prepared in consultation with OEH by a suitably qualified and experienced expert whose appointment has been endorsed by the Secretary;
(b) be approved by the Secretary prior to the commencement of expanded operations;
(c) include a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this approval;
(d) details all reasonable and feasible measures to minimise noise at the site;
(e) consider road traffic noise management and include a revised road traffic noise protocol;
(f) describe mitigation measures that would be implemented in the event that a non-compliance is identified with the noise impact assessment criteria in this approval.

This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).</td><td>Supersedes Condition 140 of the DA-31-02-99

Addresses Condition 100 and Condition 136 of the DA-31-02-99.

Noted and addressed in the following sections of the NMMP as outlined below:
a) Noted
b) Noted
c) Section 5.1
d) Section 4.1
e) Section 4.1 & Appendix C
f) Section 5.3</td></tr>
</table>

Relevant Condition	Requirement	Management Plan Reference
Meteorological Monitoring		
22	During the life of the project, the Proponent shall ensure that there is a suitable meteorological station in the vicinity of the site that complies with the requirements in the latest version of Approved Methods for Sampling of Air Pollutants in New South Wales guideline.	Addresses Condition 114, 128 and 129 of the DA-31-02-99 Noted and addressed in Section 3.1.4 of the AQGGMP
FLORA AND FAUNA		
Vegetation Management Plan		
23	The Proponent shall prepare and implement a Landscaping and Vegetation Management Plan for the Landfill. This plan must: (a) be prepared in consultation with OEH and DPI-Water by a suitably qualified and experienced expert; (b) be approved by the Secretary prior to the commencement of expanded operations; (c) include measures to minimise such vegetation loss and additional tree planting to offset this loss; (d) detail any landscaping treatments at the Landfill, with particular attention to minimising the visibility of the site/s from residences and public vantage points; (e) describe the on-going maintenance regime for rehabilitation and vegetation management in the rehabilitation area/s. This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).	Supersedes Condition 149 of the DA-31-02-99 Noted and addressed in the following sections of the Landscaping and Vegation Management Plan (LVMP) as outlined below; a) Noted b) Noted c) 3.1.5 d) 4.1.1 e) 4.1.4
Pest, Vermin & Noxious Weed Management		

Relevant Condition	Requirement	Management Plan Reference
24	The Proponent shall: a) implement suitable measures to manage pests, vermin and declared noxious weeds on site; and b) inspect the site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in surrounding area. These measures must be documented in the Landfill EMP (see condition 3 in schedule 7).	Supersedes Condition 152 of the DA-31-02-99 Noted and address in Section 3.4.2.5 of the LEMP
FIRE AND EMERGENCY MANAGEMENT		
25	The Proponent shall prepare and implement a Fire and Emergency Management Plan for the Landfill. This plan must: (a) be prepared by a suitably qualified and experienced expert; (b) be approved by the Secretary prior to the commencement of expanded operations; (c) identify all threats to the environment and public health that could arise from the operation of the project (e.g. fire, overflow or dam failure); (d) identify strategies to contain and minimise the effects of any threats to the environment and public health such as (but not limited to); • measures to minimise the risk of fire on site, including in the landfill area; • actions to extinguish any fires on site promptly; • measures to ensure adequate fire-fighting capacity on site, including a fire fighting tanker; and (e) detail a communication strategy for notifying the relevant government agencies and potentially affected community in the event of an emergency; and (f) address any chemical storage required to operate the LTP and be consistent with the Department of Planning and Environment's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'. This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).Prior to the operation of the LTP, the Fire and Emergency Management Plan must be revised and approved by the Secretary.	Noted
Safety Management System		
25A	A comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. Records from the Safety Management System must be kept on-site and must be available for inspection by the Secretary upon request. The Safety Management System shall be consistent with the Department of Planning and Environment's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.	Noted
Chemical Storage		
25B	The Applicant must store all chemicals, fuels and oils used on-site in accordance with: (a) the requirements of all relevant Australian Standards; and	Noted

Relevant Condition	Requirement	Management Plan Reference
	(b) the NSW EPA's '*Storing and Handling of Liquids: Environmental Protection- Participants Handbook'* if the chemicals are liquids. In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement must prevail to the extent of the inconsistency.	
VISUAL AMENITY		
Lighting		
26	The Proponent shall ensure that the lighting associated with the project: a) complies with the latest version of AS 4282(INT) - Control of Obtrusive Effects of Outdoor Lighting; and b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.	Noted and addressed in Section 3.4.2.6 of the LEMP
SECURITY		
27	The Proponent shall: a) install and maintain a perimeter stock fence and security gates on the site; and b) ensure that the security gates on site are locked whenever the site is unattended.	Noted and addressed in Section 3.3.6.1 of the LEMP
LANDFILL CLOSURE AND REHABILITATION		
28	The Proponent shall prepare and implement a Closure Plan for the Landfill to the satisfaction of the Secretary. This plan must: a) be prepared in consultation with the OEH, EPA, Water-NSW and other relevant agencies by suitably qualified and experienced experts whose appointment has been endorsed by the Secretary; b) be submitted to the Secretary for approval within six (6) months of the date of this approval; c) ensure that the final landform of the site is consistent with the figure in Appendix 3 of this approval; and d) include details of the post closure management measures for all aspects of the Project. e) This plan must be documented in the Landfill EMP (see condition 3 in schedule 7).	Addresses Condition 15 and Condition 20 of the DA-31-02-99 Noted and addressed within the Landfill Closure and Rehabilitation Plan (LCRP)

Relevant Condition	Requirement	Management Plan Reference
29	The Proponent shall prepare and implement a Rehabilitation Management Plan for the Landfill to the satisfaction of the Secretary. This plan must: a) be prepared in consultation with the OEH, EPA, Water-NSW and other relevant agencies by a suitably qualified and experienced expert; b) be submitted to the Secretary for approval within six (6) months of the date of this approval; c) be undertaken in a manner which is complementary with the rehabilitation of the Woodlawn mine site; and d) must ensure rehabilitation of the site does not impede or limit the rehabilitation works on any part of the Woodlawn Mine site. *e)* This plan must be documented in the Landfill EMP (see condition 3 in schedule 7)	Addresses Condition 15, 21 and 22 of the DA-31-02-99. Noted and addressed within the LCRP.
SCHEDULE 5 SPECIFIC ENVIRONMENTAL CONDITIONS – CRISPS CREEK IMF SITE		
Waste Management		
Restrictions of the Receipt, Storage, Handling and Disposal of Waste		
1	The Proponent shall only receive waste on site that is authorised for receipt by an EPL.	Noted
2	The Proponent shall ensure that any contaminated stormwater and sludges collected at the Crisps Creek IMF are disposed of at the landfill site, unless otherwise approved by OEH.	Addresses Condition 79 of the DA-31-02-99 Noted and addressed in Section 3.4.2.3 of the IMF Environment Management Plan (EMP)
3	The Proponent shall ensure that there is no storage of sludges or overnight storage of containerised waste, on the Crisps Creek IMF site, unless otherwise approved by the OEH.	Addresses Condition 28 of the DA-31-02-99 Noted and addressed in Section 3.3.3 of the IMF EMP
Waste Transportation		
4	The Proponent shall ensure that all waste containers are designed, constructed and maintained to prevent the emission of offensive odour and be water-tight to prevent the leakage of leachate during transport and handling activities.	*Addresses Condition 29 of the DA-31-02-99* Noted and addressed in Section 3.4.2.1 of the IMF EMP
Litter Control		

Relevant Condition	Requirement	Management Plan Reference
5	The Proponent shall inspect daily and clear the site (and if necessary, surrounding area) of litter on at least a weekly basis.	Noted and addressed in Section 3.3.4.5 of the IMF EMP
Pest, Vermin & Noxious Weed Management		
6	The Proponent shall: a) implement suitable measures to manage pests, vermin and declared noxious weeds on site; and b) inspect the site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in surrounding area. These measures must be documented in the Crisps Creek IMF EMP (see condition 4 in schedule 7).	Noted and addressed in Section 3.4.2.4 of the IMF EMP
AIR		
Greenhouse Gas		
7	The Proponent shall implement all reasonable and feasible measures to minimise: a) energy use on site; and b) the greenhouse gas emissions produced on site, to the satisfaction of the Secretary	Noted and addressed in Section 3.4.2.2 of the IMF EMP
Odour		
Discharge Limits		
8	The Proponent shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.	Addresses Condition 115 of the DA-31-02-99 Noted and addressed in Section 3.4.2.1 of the IMF EMP
Independent Odour Audit		
9	The Proponent shall include consideration of the Crisps Creek IMF site in any Independent Odour Audit required by condition 7 in schedule 4.	Noted and addressed in Section 3.4.2.1 of the IMF EMP
SOIL AND WATER		
Pollution of Waters		

Relevant Condition	Requirement	Management Plan Reference
10	Except as may be expressly provided in the EPL for the site, the Proponent shall comply with Section 120 of the POEO Act.	Noted and addressed in Section 3.4.2.3 of the IMF EMP
Wastewater Management		
11	The Proponent shall ensure that there is no vehicle or container wash down at the Crisps Creek IMF. *(EPA GTA)*	Addresses Condition 80 of the DA-31-02-99 Noted and addressed in Section 3.4.2.3 of the IMF EMP
12	The Proponent shall ensure that: a) the on-site sewage treatment system at the Crisps Creek IMF is operated in accordance with a Network Operator's Licence under the Water Industry Competition Act 2006 , if required; b) the design of the sewerage system is consistent with Council's DCP (if applicable); and *c)* the disposal and irrigation of treated sewage is consistent with the Environmental Guidelines Use of Effluent by Irrigation (DECC) and the Australian guidelines for water recycling: managing health and environmental risks (phase1) – 2006.	Addresses Condition 81 of the DA-31-02-99 Noted and addressed in Section 3.4.2.5 of the IMF EMP
Bunding		
13	The Proponent shall store all chemicals, fuels and oils used on site in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund, unless double-skinned tanks are used. Any bunds shall be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or OEH's Environmental Protection Manual: Technical Bulletin Bunding and Spill Management	Noted and addressed in Section 3.3.4.4 of the IMF EMP
Erosion and Sediment Control		
14	During the construction, the Proponent shall implement suitable erosion and sediment control measures on site, in accordance with the relevant requirements in the latest version of the Managing Urban Stormwater: Soils and Construction guideline	Noted
NOISE		
Limits		

<table>
<tr><th>Relevant Condition</th><th>Requirement</th><th>Management Plan Reference</th></tr>
<tr><td>15</td><td>The Proponent shall ensure that the noise generated by the operations on-site, other than freight train activities, does not exceed the limits in Table 8 at any private residential receiver.

Table 8 – Noise impact assessment criteria dB(A)
<table>
<tr><th>Receiver</th><th colspan="2">6am – 10pm</th><th colspan="2">10pm – 6am</th></tr>
<tr><td></td><td colspan="2">$L_{Aeq(15\ minute)}$</td><td>$L_{Aeq(15\ minute)}$</td><td>L_{Amax}</td></tr>
<tr><td>Any private receiver</td><td colspan="2">35</td><td>35</td><td>45</td></tr>
</table>
Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy</td><td>Supersedes Condition 140 of the DA-31-02-99

Addresses Condition 101 of the DA-31-02-99

Noted and addressed in Section 3.4.2.7 of the IMF EMP</td></tr>
<tr><td>16</td><td>Noise emissions from freight trains entering and leaving the site must not exceed the noise limit of 45 dB(A) LAeq (15 minute) prior to 7:00 am and 50 dB(A) LAeq (15 minute) after 7:00 am.
Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy</td><td>Addresses Condition 102 of the DA-31-02-99

Noted and addressed in Section 3.4.2.6 of the IMF EMP</td></tr>
<tr><td colspan="3">Operating Hours</td></tr>
<tr><td>17</td><td>The Proponent shall comply with the operating hours in Table 9 for the site, unless otherwise agreed in writing by the EPA.

Table 9 – Operating Hours
<table>
<tr><th>Activity</th><th>Day</th><th>Hours</th></tr>
<tr><td rowspan="3">Construction</td><td>Monday – Friday</td><td>7am – 6pm</td></tr>
<tr><td>Saturday</td><td>7am – 1 pm</td></tr>
<tr><td>Sunday & Public Holidays</td><td>Nil</td></tr>
<tr><td rowspan="2">Operations</td><td>Monday – Saturday</td><td>6am – 10pm</td></tr>
<tr><td>Sunday, Christmas Day and Good Friday</td><td>Nil</td></tr>
</table></td><td>Noted and addressed in Section 3.3 of the IMF EMP</td></tr>
<tr><td colspan="3">VISUAL AMENITY</td></tr>
<tr><td colspan="3">Lighting</td></tr>
</table>

Relevant Condition	Requirement	Management Plan Reference
18	The Proponent shall ensure that the lighting associated with the project: a) complies with the latest version of AS 4282(INT) - Control of Obtrusive Effects of Outdoor Lighting; and b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network	Noted and addressed in Section 3.4.2.8 of the IMF EMP
SECURITY		
19	The Proponent shall: a) install and maintain a perimeter stock fence and security gates on the site; and b) ensure that the security gates on site are locked whenever the site is unattended.	Noted and addressed in Section 3.3.4.1 of the IMF EMP
RAIL TRAFFIC		
20	The Proponent shall ensure that only 2 trains (4 movements) in total are permitted to ingress and egress from the Crisps Creek IMF per day from Monday to Saturday.	Noted and addressed in Sections 3.3.1 & 3.4.2.6 of the IMF EMP
21	The tonnage of waste delivered to the IMF by train must not exceed 780,000 tpa until the electronic signalling system has been implemented so as to eliminate the need for waste trains to stop across the road crossing at Tarago.	Noted
22	The Proponent shall prepare and implement a Rail Transport Code of Conduct for the Crisps Creek IMF in consultation with ARTC and Countrylink and to the satisfaction of the Secretary. This Plan must: be submitted to the Secretary for approval prior to the commencement of expanded operations; a) detail operational rail traffic management measures including driver code of conduct, locomotive arrival and departure procedures (e.g. reduced locomotive speed); b) outline measures to minimise rail traffic noise; and *c)* detail measures to minimise rail traffic related conflicts with existing rail operations.	Noted and addressed in Section 3.4.2.6 of the IMF EMP
SCHEDULE 6 - TRAFFIC AND ROAD UPGRADES		
TRAFFIC AND TRANSPORT		
Delivery of Waste from the IMF to the Landfill		

Relevant Condition	Requirement	Management Plan Reference
1	The Proponent shall ensure that at all times heavy vehicles transporting waste from the Crisps Creek IMF to the Landfill travel via the Crisps Creek IMF site access road, onto Bungendore Road, onto Collector Road and then onto the Landfill site access road.	Noted and addressed in Section 3.4.2.6 of the IMF EMP
2	The Proponent shall ensure that the reverse of the route specified in condition 1 of this schedule above is used to egress from the Landfill site at all times.	Refer to the section of 3.4.2.6 of the IMF EMP
Delivery of Regional Waste by Road		
3	The Proponent shall ensure that all regional waste is transported to the Landfill by road along those routes specified in Appendix 4 of this approval, unless otherwise approved by the Secretary. Alternative transport routes may be considered where they can be shown to be more efficient, if new roads are constructed in the region, where suitable upgrades occur along other transport routes to the Landfill or where they are required to allow waste to be delivered from a new locality. Note: this condition is linked to condition 6 in schedule 3.	Noted
Transport Code of Conduct		
4	Prior to the receipt of more than 50,000 tpa of regional waste by road at the Landfill, the Proponent shall prepare and implement a Transport Code of Conduct for the project to the satisfaction of the Secretary. This protocol must: a) be prepared in consultation with the RMS, Goulburn Mulwaree Council, Palerang Council and the Community Liaison Committee, and be submitted to the Secretary for approval; b) describe the measures to be implemented to: • minimise the impacts of the project on the local and regional road network including traffic noise; • ensure truck drivers only use road shoulders to encourage overtaking at locations where it is acceptable to do so (i.e. in terms of safety and pavement strength), as determined by Council; • minimise conflicts with other road users e.g. school bus operators; and c) include measures to ensure truck drivers are aware of the approved routes for the transport of waste by road.	Noted
ROAD UPGRADES		
Palerang LGA		

Relevant Condition	Requirement	Management Plan Reference
5	Within 12 months of the date of this approval, the Proponent shall undertake a detailed pavement analysis/road safety audit of the section of Main Road 268 (Bungendore/Tarago Road) to the south of the intersection of Collector Road and Main Road 268 (Bungendore/Tarago Road) where the bitumen seal of the road is currently less than 7 metres wide. The audit shall: a) be prepared by a suitably independent and qualified expert whose appointment has been endorsed by the Secretary; b) be prepared in consultation with Palerang Council and the RMS; c) establish the mandatory road upgrades and traffic management measures required to address all road pavement and safety issues associated with the project on this section of road; and d) determine the full cost of undertaking any upgrades, and the Proponent's proportional contribution to these works based on heavy vehicle usage along Main Road 268 (Bungendore/Tarago Road). *Note: the Proponent must submit a copy of this audit to the Department within 2 weeks of its completion. See Appendix 4 for reference to the intersection of Collector Road and Main Road 268.*	Noted
6	Prior to the receipt of more than 30,000 TPA of regional waste at the Landfill by road from the south of the intersection of Collector Road and Main Road 268 (Bungendore/Tarago Road), the Proponent shall: a) implement all mandatory pavement and traffic management measures required to address all road pavement/safety issues associated with the project on Main Road 268 (Bungendore /Tarago Road) recommended by the audit required by condition 5 of this schedule; and b) forward fund the full cost of and provide (on Main Road 268 - Bungendore/Tarago Road) any mandatory road upgrades recommended by the audit required by condition 5 of this schedule, to the satisfaction of the Secretary.	Noted
7	In any case, the Proponent shall ensure that all mandatory road upgrades measures provided as part of condition 6 of this schedule are completed prior to the receipt of more than 30,000 tpa of regional waste at the Landfill by road from the south of the intersection of Collector Road and Main Road 268 (Bungendore/Tarago Road). .	Noted
Gouldburn Mulwaree LGA		

Relevant Condition	Requirement	Management Plan Reference
8	Prior to the commencement of expanded operations, the proponent shall assess the need for road upgrades, on the section of Main Road 268 (Bungendore/Tarago Road) between the Crisps Creek IMF site access and the intersection of Collector Road and Bungendore/Tarago Road. This assessment shall: a) be prepared to the satisfaction of the Secretary; b) be prepared by a suitably independent and qualified expert whose appointment has been endorsed by the Secretary in consultation with RMS; c) evaluate the suitability of the provision of a climbing lane or other suitable road upgrade alternative/s on this section of road in terms of road traffic safety and the safety of the Proponent's truck drivers negotiating the right-hand turn into Collector Road; d) based on the above, identify the most suitable road upgrade option for this section of road; and, if identified as the most suitable road upgrade option by this condition 8(d) e) assess the need for a climbing lane against Austroads Guide to Road Design Part 3: Geometric Design based on heavy vehicle usage associated with the Bioreactor on this section of road.	Noted
9	Depending on which road upgrade option is identified as most suitable under condition 8(d) above, prior to the commencement of expanded operations, or a time otherwise agreed to by the Secretary, the Proponent shall provide that road upgrade on the above section of Main Road 268 (Bungendore/Tarago Road), to the satisfaction of Goulburn Mulwaree Council.	Noted
ROAD MAINTENANCE CONTRIBUTIONS		
10	From the date of this approval, the Proponent shall pay a minimum quarterly contribution of 4.1 cents per kilometre per tonne to: a) Palerang Council for waste hauled to the Landfill along Palerang Council maintained roads; and b) Goulburn Mulwaree Council for waste hauled to the Landfill along Goulburn Mulwaree Council maintained roads. The contribution rate shall be adjusted every year from the date of this approval to account for the effects of inflation (RMS Road Cost Index).	Noted

Relevant Condition	Requirement	Management Plan Reference
11	The Proponent shall receive a reduction in road maintenance contributions paid to Palerang Council (in cents per kilometre per tonne of waste hauled) as required by condition 10 of this schedule based on the difference between the full cost of undertaking any mandatory road upgrades along Main Road 268 (Bungendore/Tarago Road) and what the Proponent's proportional contribution should be (as determined by the audit required by condition 5 (d) of this schedule) unless other arrangements are made with Palerang Council, to the satisfaction of the Secretary.	Noted
SCHEDULE 7 - ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING		
COMMUNITY LIAISON COMMITTEE		
1	The Proponent shall continue to operate a Community Liaison Committee (CLC) comprising representatives of the Proponent, the local community, Council and Supervisory Licensee. Representatives of relevant government agencies may be invited to attend meetings of the Committee as required. The Chairperson and procedures for the Committee including frequency of meetings shall be determined by the Committee	Noted
2	Within six (6) months of the date of this approval, the Proponent must submit details of the CLC members including the Chairperson and frequency of meetings to the Department for the Secretary's endorsement.	Noted
ENVIRONMENTAL MANAGEMENT		

Relevant Condition	Requirement	Management Plan Reference
3	The Proponent shall prepare and implement an Environmental Management Plan (EMP) for the Landfill to the satisfaction of the Secretary. This plan must: a) be submitted to the Secretary for approval prior to the commencement of expanded operations; b) be prepared in consultation with the OEH and other relevant agencies by a suitably qualified and experienced expert/s; c) provide the strategic framework for environmental management of the Landfill including all plans specified for inclusion in schedule 4; d) identify the statutory approvals that apply to the Landfill; e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Landfill; f) include procedures to keep the local community informed about the operation and environmental management of the Landfill; g) describe the procedure for stakeholder consultation and complaints handling; and h) include a clear plan depicting all the monitoring currently being carried out within and around the Landfill.	Noted and addressed in the following sections of the LEMP, as outlined below; a) Noted b) Noted c) 1.3 d) 2.1 e) 4.1 f) 4.3 g) 4.3 h) 5.1

Relevant Condition	Requirement	Management Plan Reference
4	The Proponent shall prepare and implement an Environmental Management Plan (EMP) for the Crisps Creek IMF to the satisfaction of the Secretary. This plan must: a) be submitted to the Secretary for approval prior to the commencement of expanded operations; b) be prepared in consultation with the OEH and other relevant agencies by a suitably qualified and experienced expert/s; c) provide the strategic framework for environmental management of the Crisps Creek IMF including: i. water management including any surface and groundwater monitoring programs, measures to minimise water use, control soil erosion, prevent groundwater contamination, and comply with any surface water discharge limits; ii. noise management and monitoring protocols for evaluating compliance with the noise impact assessment criteria in this approval; iii. landscaping treatment at the Crisps Creek IMF to minimise visibility of the site from residences and public vantage points; iv. details of the on-going maintenance regime ('Works Plan') for riparian stream rehabilitation and vegetation management along the Mulwaree River; v. identify all threats to the environment and public health that could arise from the operation of the Crisps Creek IMF, measures to minimise these risks and notify the relevant government agencies and community in the event of an emergency; d) identify the statutory approvals that apply to the Crisps Creek IMF; e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Crisps Creek IMF; f) include procedures to keep the local community informed about the operation and environmental management of the Crisps Creek IMF; g) describe the procedure for stakeholder consultation and complaints handling; and h) include a clear plan depicting all the monitoring currently being carried out within and around the Crisps Creek IMF.	Addresses Condition 75, 125, 126 & 127 of the DA-31-02-99 Noted and addressed in the following sections of the IMF EMP, as outlined below; a) Noted b) Noted c) 3.4 i) 3.4.2.3 & 5.3.2 ii) 3.4.2.7 iii) 3.4.2.8 iv) 3.4.2.3 v) 3.4.2.9, 3.4.2 & 4.4.2 d) 2.1 e) 4.1.1 f) 4.3.2 g) 4.3.4 h) 5.3.2
Annual Environmental Management Review		

Relevant Condition	Requirement	Management Plan Reference
5	One (1) year after the commencement of expanded operations, and annually thereafter, the Proponent shall prepare an Annual Environmental Management Report (AEMR) to review the environmental performance of the project to the satisfaction of the Secretary. This review must: a) describe the operations that were carried out in the past year; b) analyse the monitoring results and complaints records of the Project over the past year, which includes a comparison of these results against the: • relevant statutory requirements, limits or performance measures/criteria; • monitoring results of previous years; and • relevant predictions in the EA; c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; d) identify any trends in the monitoring data over the life of the Project; and e) describe what measure will be implemented over the next year to improve the environmental performance of the Project.	Noted
INDEPENDENT ENVIRONMENTAL AUDIT		
6	Every three (3) years after the first Independent Odour Audit required under condition 7 of schedule 4 of this approval, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the Project. This audit must: a) be conducted by a suitably qualified, experienced, and independent team of experts, including both traffic and odour experts, whose appointment has been endorsed by the Secretary; b) incorporate and consider the findings/mandatory recommendations of any Independent Odour Audit required by this approval. c) assess the environmental performance of the Project, and its effects on the surrounding environment; d) assess whether the Project is complying with the relevant standards, performance measures, and statutory requirements; e) review the adequacy of any strategy/plan/program required under this approval; and, if necessary, f) recommend measures or actions to improve the environmental performance of the Project, and/or any strategy/plan/program required under this approval.	Noted
COMPLAINTS HANDLING PROCEDURE		

Relevant Condition	Requirement	Management Plan Reference
7	Within 6 months of the date of this approval, a complaints handling procedure must be submitted to the Secretary for approval. The procedure shall be prepared in consultation with the Department, Goulburn-Mulwaree Council, the EPA and the Community Liaison Committee. The complaints handling procedure must include: • a formal complaint/incident reporting procedure; • an investigation procedure; and • a complaint resolution procedure. A report of the complaint and the response/action taken to resolve the complaint must be made publicly available on the proponent's website within 7 days of a complaint being made.	Noted
7A	The Proponent shall provide a report to the Secretary of the complaints received, the response/action taken and timeframe in accordance with Condition 7, on an annual basis which is to be submitted within the AEMR. The report shall include all matters required within subsections of Condition 7.	Noted and addressed in Sections 4.3.4 and 5.1.3 of the LEMP.
INCIDENT REPORTING		
8	Upon detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) material harm to the environment, the Proponent shall immediately (or as soon as practical thereafter) notify the Department and other relevant agencies of the exceedance/incident. Within 7 days of the date of the incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.	Noted
Revision of Plans & Programs		
9	Within three (3) months of the submission of any: a) audit required under this approval; b) incident report under condition 8 of this schedule; or c) annual review under condition 5 of this schedule, The Proponent shall review, and if necessary revise the plans and programs required under this approval to the satisfaction of the Secretary.	Noted
ACCESS TO INFORMATION		

Relevant Condition	Requirement	Management Plan Reference
10	From the commencement of expanded operations, the Proponent shall make the following information publicly available on its website as it is progressively required by the approval: a) a copy of all current statutory approvals; b) a copy of the Environmental Management Plan required under this approval; c) a copy of any Annual Environmental Management Report including monitoring results (over the last 5 years); d) a copy of any Independent Environmental and Odour Audit, and the Proponent's response to the recommendations in any audit e) report of the complaints and the response/action taken to resolve the complaint as required by Condition 7; f) a copy of the minutes of the Community Liaison Committee Meetings; and g) any other matter required by the Secretary.	Noted and addressed in Section 4.3.3 of the LEMP.

2.2 Conditions of Development Consent (DA-31-02-99)

Table 2.2 – Conditions of Development Consent (DA-31-02-99)

Relevant Condition	Requirement	Management Plan Reference
DA No. 31-02-99 Conditions		
SCHEDULE 2		
Adherence to Terms of DA and EIS		
1	Development shall be carried out in accordance with: a) DA No. 31-02-99; b) the EIS prepared by Woodward-Clyde Pty Ltd, dated February 1999; c) the EIS Supplementary Report prepared by Woodward-Clyde Pty Ltd, dated March 1999 d) the Amended DA and accompanying information prepared by Woodward-Clyde, dated 12 November 1999, **e) Modification Application DA31-02-99 Mod1 and accompanying Environmental Assessment titled '*Modification to DA31-02-99 to Receive Regional Council Waste at the Woodlawn Bioreactor',* prepared by Veolia Environmental Services, dated February 2010 and the associated '*Response to Submissions*' prepared by Veolia Environmental Services dated 12 April 2010;** **f) Modification Application DA 31-02-99 MOD 2; and** **g) Modification Application DA 31-02-99 MOD 3.**	Noted
Deferred Commencement		
2	In accordance with section 80(3) of the EP&A Act, this consent shall not operate until the Applicant satisfies the Minister that it has been awarded a valid contract for the long-term supply of waste, sourced from Sydney, at a rate of at least 150,000 tonnes per annum.	Noted
Duration of the Consent		
3	Approval is granted for 20 years from the date of commencement of landfilling operations, subject to the input rate variations as specified in Condition 4.	Noted

<table>
<tr><th>Relevant Condition</th><th>Requirement</th><th>Management Plan Reference</th></tr>
<tr><td colspan="3">Input Rate Variations</td></tr>
<tr><td>4</td><td>The proposed landfill shall not exceed the annual input rates in Table 1, unless otherwise approved by the Minister. The Minister shall give such approval if the need for additional capacity is demonstrated by an independent public assessment of landfill capacity and demand in the Sydney Region. The assessment shall:
a) take into account the status of alternative technologies for putrescible waste management and be undertaken at five-yearly intervals;
b) be completed one year before commencement of each five year period, as set out in Table 1, or at any other time at the request of the Applicant, with the first review due four years from the date of operational commencement; and
c) be undertaken by an independent person or organisation, to be appointed by the Minister, with the costs to be funded by the Applicant.

Table 1: Maximum Input Rates
<table><tr><th>Years from date of operational commencement</th><th>Maximum Input Rate</th><th>Maximum Input Rate (Received by Road from surrounding LGAs)</th></tr><tr><td>0-5</td><td>400,000 TPA</td><td>0</td></tr><tr><td>6-10</td><td>360,000 TPA</td><td>50,000 TPA</td></tr><tr><td>11-15</td><td>325,000 TPA</td><td>50,000 TPA</td></tr><tr><td>16-20</td><td>290,000 TPA</td><td>50,000 TPA</td></tr></table></td><td>Noted</td></tr>
<tr><td>5</td><td>In any event, no more than 500,000 tonnes shall be landfilled at the site in any one year.</td><td>Noted</td></tr>
<tr><td colspan="3">Compliance with Requirements of the Secretary and Prescribed Conditions</td></tr>
<tr><td>6</td><td>The Applicant shall comply with all reasonable requirements of the Secretary in respect of the implementation of any measures arising from reports submitted in accordance with the conditions of this consent, within such time as the Secretary may agree.</td><td>Noted</td></tr>
<tr><td>7</td><td>The Applicant shall comply with all relevant conditions prescribed in Part 7 of the Environmental Planning and Assessment Regulation 1994, as required by Section 80A (11) of the Act.</td><td>Noted</td></tr>
<tr><td colspan="3">Obligation to Prevent and Minimise Harm to the Environment</td></tr>
</table>

Relevant Condition	Requirement	Management Plan Reference
8	The Applicant shall: a) take all practicable measures to prevent and minimise harm to the environment as a result of the construction, operation, post closure and, where relevant, the decommissioning of the development; and b) take all practicable measures to operate the landfill as a bioreactor, to ensure to the maximum extent practicable, the biological decomposition of all organic waste and productive capture of methane.	Noted
Structural Adequacy		
9	Detailed plans and specifications relating to the design and construction of all structural elements associated with the proposed development shall be submitted to the Principal Certifying Authority (PCA) prior to the commencement of construction works. Such plans and specifications shall be accompanied by certification provided by a practicing professional structural engineer or an accredited certifier certifying the structural adequacy of the proposed building design and compliance with the Building Code of Australia (BCA).	Noted
Verification of Construction		
10	Upon completion of building works and prior to the issue of an occupation certificate, a certificate prepared by a suitably qualified person or a compliance certificate issued by an accredited certifier, is to be submitted to the PCA certifying that the following building components, where relevant, have been completed in accordance with approved plans and specifications: a) footings; b) concrete structures, including ground floor and any subsequent floors, and c) retaining walls and columns; d) framing and roof structure; e) fire protection coverings to building elements required to comply with the BCA; and f) mechanical ventilation. The certificate/s shall demonstrate at what stage of construction inspections were undertaken.	Noted
Dispute Resolution		

Relevant Condition	Requirement	Management Plan Reference
11	In the event that the Applicant, Council, a government authority other than the Department or the PCA cannot agree on the specification or requirements applicable under this consent, the matter shall be referred by either party to the Secretary or, if not resolved, to the Minister, whose determination of the disagreement shall be final and binding on the parties.	Noted
ENVIRONMENTAL MANAGEMENT		
Environmental Services		
12	The Applicant shall employ or contract suitably qualified environmental services throughout the duration of landfilling/construction and rehabilitation activities. The Applicant shall nominate an Environmental Management Representative/s (EMR/s) as the principle person responsible for overseeing environmental management of the project and supervision of environmental services. The EMR's/EMRs' qualifications, experience and appointment shall be to the satisfaction of the Secretary. The EMR/s shall have the authority to stop work if an adverse impact on the environment has occurred or is likely to occur. The EMR/s shall: a) be responsible for the preparation or certification of all environmental b) management plans and procedures; c) be responsible for considering and advising on matters specified in the d) conditions of this consent and compliance with such matters; e) oversee the receipt of, and response to, complaints about the environmental performance of the project; f) facilitate an induction and training program in environmental awareness and responsibility required under the Environment Protection Licence (EPL), both generally and specific to the Applicant's activities for all persons involved with construction, operation, monitoring and rehabilitation activities at all sites. The training program must be implemented annually from the commencement of the development and evaluated every three years; and g) be present on-site during any critical construction or operational activities as defined in the relevant Landfill Environmental Management Plan (LEMP).	Noted
Landfill Environmental Management Plan		

Relevant Condition	Requirement	Management Plan Reference
13	Prior to the Applicant applying to the EPA for an EPL under the Protection of the Environment Operations Act 1997, the Applicant must prepare a comprehensive Landfill Environmental Management Plan (LEMP) in accordance with the EPA's *Environmental Guidelines: Solid Waste Landfills*. The LEMP shall incorporate all relevant plans and protocols as required by the conditions of this consent. The LEMP shall accompany the application for an EPL. *(EPA GTA)*	Noted
Licence Applications		
14	Prior to applying to the EPA for an EPL, the Applicant must be able to demonstrate that all works required to be addressed to ensure te geo-technical stability of the premises have been undertaken in accordance with; a) the recommendations of the report prepared by BFP Consultants P/L, dated 17 December 1998, entitled Woodlawn Landfill – Geo-technical Study; and b) the requirements of the NSW Department of Mineral Resources. (EPA GTA)	Noted
15	The Applicant must prepare a post closure landfill rehabilitation management plan (PCLRMP). The PCLRMP must be documented in the LEMP and must address the following: a) closure strategies in the event that landfilling activities conclude prior to filling of the mine void; b) site capping and revegetation in accordance with benchmark technique 28 of the Environmental Guidelines: Solid Waste Landfills; c) post closure environmental monitoring; d) post closure management of surface water in the event that the void is not filled with waste. e) post closure management of Evaporation Dam No 3 (ED3); f) post closure leachate management, including the management of the g) bioreactor processes; h) post closure landfill gas management; i) post closure maintenance; and j) the estimated costing for these works must be provided and should be based on a nominal period of at least 50 years after the landfill ceases to accept waste. The actual duration of this period will be determined from actual monitoring data at the time. (EPA GTA)	Refer to PA condition 28 & 29 of schedule 4
Community Liaison Committee		

Relevant Condition	Requirement	Management Plan Reference
16	Prior to the commencement of construction, the Applicant shall establish a Community Liaison Committee (CLC) comprising representatives of the Applicant, the local community, Council and Supervisory Licensee. Representatives of relevant government agencies may be invited to attend meetings of the Committee as required. The Chairperson and procedures for the Committee including frequency of meetings shall be determined by the Committee.	Noted
Consultation with Tarago and District Progress Association Incorporated (TADPAI)		
16A	The Applicant shall meet quarterly with TADPAI representatives and provide updated information on odour incidents, leachate management and gas extraction and resolution of incidents related to the local community.	Noted and addressed in Section 4.3.2.1 of the LEMP.
Annual Environmental Management Report		
17	In order to facilitate the integration of the environmental management of the subject land and the Woodlawn mine site, the Applicant shall liaise with the holder of the Woodlawn mining lease in relation to the formulation and review of the Annual Environmental Management Report (AEMR) for the mine. The AEMR shall comply with the requirements of the Secretary of the Department of Mineral Resources and be subject to review by all relevant government agencies.	Noted
Conditions Compliance Reports		
18	The Applicant shall submit to the Secretary, the EPA, DPI Water, Water NSW and Council Conditions Compliance Reports as follows: a) at least one month prior to the commencement of construction works for the purposes of landfilling, or within such period as otherwise agreed to by the Secretary; b) at least one month prior to the commencement of construction works for the purposes of the intermodal transfer facility, or within such period as otherwise agreed to by the Secretary; c) every two years following the date of commencement of construction for the purposes of landfilling activity, or within such period as otherwise agreed to by the Secretary.	Noted
Independent Environmental Audits		

Relevant Condition	Requirement	Management Plan Reference
19	Every three years following the date of this consent, or at periods otherwise agreed to by the Secretary, and until such time as agreed to by the Secretary, the Applicant shall arrange for an independent audit of the environmental performance of the development. The audits shall: a) be conducted pursuant to ISO 14010 – Guidelines and General Principles for Environmental Auditing, ISO 14011 – Procedures for Environmental Monitoring and any specifications of the Secretary; b) be conducted by a suitably qualified independent person approved by the Secretary; c) assess compliance with the requirements of this consent; d) assess the implementation of the LEMPs and review the effectiveness of the environmental management of the development; and e) be carried out at the Applicants' expense. The audits shall be submitted to the Secretary, the EPA, DPI Water, Water NSW, Council and the Community Liaison Committee. The Applicants shall comply with all reasonable requirements of the Secretary in respect of any measures arising from or recommended by the audits and within such time as agreed to be the Secretary.	Noted
SITE REHABILITATION		
Whole of Site Rehabilitation		
20	The filling of the Woodlawn mine void with waste and the final rehabilitation of the land subject to the DA shall be undertaken in a manner which is complementary with the rehabilitation of the Woodlawn mine site. Details of integrated rehabilitation shall be provided in the Rehabilitation Management Plan prepared in accordance with Condition 22.	Refer to PA condition 28 of schedule 4
21	Activities associated with landfilling must not impede or limit the rehabilitation works on any part of the Woodlawn Mine site.	Refer to PA condition 29 of schedule 4
Rehabilitation Management Plan		

Relevant Condition	Requirement	Management Plan Reference
22	The Applicant shall prepare and implement a Rehabilitation Management Plan (RMP) which addresses areas designated for revegetation and rehabilitation as well as areas deemed not to require such treatment. The RMP shall address, but not necessarily be limited to the following matters: a) clear identification of proposed the new rehabilitation works to be undertaken by the Applicant, details of the Woodlawn Mine site rehabilitation works being undertaken by the mine leaseholder, and a clear definition of the respective obligations of the parties; b) an outline of financial arrangements for site rehabilitation works proposed in the plan; c) the rehabilitation standards to be adopted; d) a rehabilitation schedule (to be reviewed on a regular basis); e) a post-establishment maintenance and monitoring program for rehabilitated f) areas; g) procedures for the removal of all derelict buildings and infrastructure; h) closure strategies in the event that landfilling activities conclude prior to the i) capacity of the mine void being filled; and j) integration of rehabilitation works with the rehabilitation of the Woodlawn mine site. The RMP shall be included in the LEMP.	Refer to PA condition 29 of schedule 4
23	The Applicant must obtain approval from the End of Mine Life Steering Committee and the EPA to disturb, obtain or use materials from the Woodlawn Mine site for the construction, operation and rehabilitation of the landfill, intermodal facility, haul roads and any other infrastructure at the premises.	Noted
24	The Applicant shall liaise with the holder of the Woodlawn mining lease in the preparation of a Mining Operations Plan (MOP) in accordance with the requirements of the Department of Mineral Resources	Noted
EPA Financial Assurance		

Relevant Condition	Requirement	Management Plan Reference
25	The Applicant shall provide to the EPA financial assurance commensurate with the ongoing environmental management and rehabilitation responsibilities for the landfill and associated activities. The financial assurance shall consist of: a) an unconditional and irrevocable bank guarantee, or other form of financial assurance acceptable to the EPA. The financial assurance is to be adjusted annually so that it keeps pace with inflation for so long as the EPA requires it to remain in place. The amount of the assurance will be determined by an independent review of the costings applicable to activities identified in the LEMP and Conditions 55 and 159; and b) an accumulating fund generated by monies set aside annually on deposit, or other form of financial assurance acceptable to the EPA which will have to be increased in a similar way, in respect of post closure works and responsibilities. The initial and ongoing annual deposit into this fund will be determined by an independent expert review of the costings applicable to activities identified in Condition 15. The financial assurance shall be maintained during the operation of the facility and thereafter until such time as the EPA notifies the Applicant in writing that it is satisfied that the premises have been appropriately rehabilitated and are environmentally secure. Written approval must be obtained from the EPA for any changes to the financial assurance detailed in this condition.	Noted
WASTE SOURCES AND TYPES		
26	The applicant shall ensure that; a) all waste received by rail at the Woodlawn Waste Management Facility is sourced from the Sydney region, and; b) All waste receive by road at the Woodlawn Waste Management Facility is sourced from local government areas in the vicinity of the site (in accordance with DA31-02-99 Mod1).	Noted

Relevant Condition	Requirement	Management Plan Reference
27	The only wastes that can be disposed of at the premises are as follows: a) inert waste and solid waste defined in Schedule 1 of the Protection of the Environment Operations Act 1997 or waste that is assessed and classified as inert or solid waste following the technical assessment procedure outlined in Technical Appendix 1 of the Waste Guidelines; b) asbestos waste (including asbestos waste in bonded matrix and asbestos fibre and dust waste resulting from the removal of thermal or acoustic insulating materials or from processes involving asbestos material, and dust from ventilation collection systems) disposed of in accordance with clause 29 (5) of the Protection of the Environment Operation (Waste) Regulation 1996; c) tyres in accordance with the EPA's tyre disposal specification; and d) other types of waste as expressly approved by the EPA. *(EPA GTA)*	Noted
WASTE MANAGEMENT PROCEDURES		
28	There shall be no storage of sludges nor overnight storage of containerised waste, on the intermodal facility site. This condition may be varied with the written approval of the EPA if it is required by police; and /or because the operation, personnel or equipment are endangered. *(EPA GTA)*	Refer to PA condition 3 of schedule 5
Waste Transportation		
29	All containers must be designed, constructed and maintained to prevent the emission of offensive odour and be water tight to prevent the leakage of leachate from waste containers during transport and handling activities. *(EPA GTA)*	Refer to PA condition 4 of schedule 5
30	All pressure relief valves on the containers must be designed to meet the environmental requirements of condition 29. *(EPA GTA)*	Noted and addressed in Section 4.1.2 of the AQGGMP
31	A Quality Assurance Program must be developed and implemented to ensure compliance with Condition 29. The program must include but need not necessarily be limited to the following: a) Container integrity; b) Integrity and performance of rubber seals; c) Performance of mechanisms to filter and remove odour where required d) including cleaning and performance testing; and *e)* Container cleaning. *(EPA GTA)*	Noted and addressed in Section 4.1.2 of the AQGGMP
Spillage Response		

Relevant Condition	Requirement	Management Plan Reference
32	A protocol must be developed and implemented to manage incidents involving spillage of waste. The protocol must include but should not necessarily be limited to procedures identifying immediate cleaning of the site, disinfection and reporting protocols. *(EPA GTA)*	Noted and addressed in Section 7 of the ERP
TRANSPORT CODE OF CONDUCT		
32B	Prior to the receipt of waste from adjoining government areas via road outlined in DA31-02-99 Mod1, the Applicant shall prepare and implement a Transport Code of Conduct for the project to the satisfaction of the Secretary. This protocol must; a) be prepared in consultation with the RTA, Goulburn Mulwaree and Palerang Councils, and be submitted to the Secretary for approval prior to the receipt of waste at the facility from adjoining local government areas via road; and b) describe the measures to be implemented to; - minimise the impacts of the Development on the local and regional road network including traffic noise, and; - minimise conflicts with other road users e.g. school bus operators.	Noted
Control of Incoming Wastes		
33	The Applicant must develop procedures to screen deliveries of waste to ensure compliance with Condition 27. The procedure must be documented in the LEMP. *(EPA GTA)*	Noted
34	The Applicant shall use its best endeavours to ensure that all waste received at the intermodal facility is containerised.	Noted
OPERATIONAL STAGING AND LANDFILL MANAGEMENT		
35	The Applicant shall prepare a landfilling schedule consistent with the concept detailed in figure 4.10 in the EIS. Details of the landfill schedule and shall be provided in the LEMP.	Noted
Cover Material		
36	Cover material must be virgin excavated natural material, unless otherwise approved in writing by the EPA. *(EPA GTA)*	Noted and addressed in Section 3.3 of SWMP
37	Cover material must be of a quality that will not inhibit the biological decomposition of the landfilled waste. *(EPA GTA)*	Noted and addressed in Section 3.3 of SWMP

Relevant Condition	Requirement	Management Plan Reference
38	Cover material must be applied to a minimum depth of 15 centimetres over all exposed landfilled waste, prior to ceasing operations at the end of each day, unless otherwise approved in writing by the EPA. *(EPA GTA)*	Refer to section 3.3 of SWMP
39	Cover material must be applied to a depth of 30 centimetres over surfaces of the landfilled waste which are exposed for more than 90 days, unless otherwise approved in writing by the EPA. *(EPA GTA)*	Noted and addressed in Section 3.3 of SWMP
40	At least two weeks supply of cover material must be available at the premises under all weather conditions, unless otherwise approved in writing by the EPA. *(EPA GTA)*	Refer to section 3.3 of SWMP
Landfill Gas		
41	The Applicant shall ensure to the maximum practical extent the quantity of landfill gas that is collected and treated.	Noted and addressed in Sections 3.1.7 & 4.1 of the AQGGMP
42	The Applicant must ensure that any flare, power station or other proposed landfill gas treatment or beneficial re-use system is designed to provide a destruction efficiency of hydrocarbons, organic air toxics and odours of not less than 98%. *(EPA GTA)*	Noted and addressed in Section 3.1.6 of the AQGGMP
43	The flare system must be designed, installed and operated so that hydrocarbons, organic air toxics and odours are destroyed in accordance with Condition 42. The system must be provided with automatic ignition system and automatic shut-off gas valve. Scrubbers or other suitable treatment must be provided if it is required to remove hydrogen sulfide in order to comply with Condition 42. The system must be installed progressively during the operation of the landfill. *(EPA GTA)*	Noted and addressed in Sections 3.1.6 & 3.1.7 of the AQGGMP
44	Any landfill gas condensate must be collected and returned to the leachate recycling system. *(EPA GTA)*	Noted and addressed in Section 3.1.5 of the LMP
45	The landfill gas extraction and utilisation system must be designed and installed to withstand forces created by the weight and settlement of waste in the landfill.	Noted and addressed in Section 3.1.7 of the AQGGMP
46	All pipe work carrying landfill gas adjacent to the haul road must be designed and installed so it is protected from damage as a result of haulage activities. *(EPA GTA)*	Noted and addressed in Section 3.1.7 of the AQGGMP
WATER QUALITY AND MANAGEMENT		
Waste Management Facility Site		

Relevant Condition	Requirement	Management Plan Reference
47	The premises and the activities carried out therein must not pollute surface water or groundwater. *(EPA GTA)*	Noted and addressed in the following sections of the SWMP; Section 1.3, Section 3, Section 4, and Section 5
Groundwater and Leachate Management		
48	The mine void must be managed to ensure the groundwater gradient directs groundwater flows towards the mine void, unless otherwise approved in writing by the EPA. *(EPA GTA)*	Noted and addressed in Sections 3.1.2 & 4.2.3 of the SWMP
49	Maintenance of the groundwater gradient post closure of active landfill operations (including a period of after-care) must ensure that impact of any degraded residue from the landfill on groundwater represents no threat to human health or the environment.	Noted and addressed in Section 4.2.3 of SWMP
50	A leachate collection/storage/recirculation/treatment system must be designed, installed and operated to: a) accept other waste-waters and contaminated storm-waters generated as a result of the operation of the facility; b) efficiently operate, notwithstanding the settlement of the waste; c) ensure that all liquid (including rainwater, surface water, groundwater and leachate) introduced into the waste is monitored to determine its chemical composition and quantity; d) ensure that liquid is not deliberately stored in the landfilled waste, unless it is necessary for the efficient decomposition of the landfilled waste. e) ensure that leachate can be recirculated within the biologically active zones of the landfilled waste; and f) comply with Conditions 48 and 8(b). Details of this system must be documented in the LEMP. *(EPA GTA)*	Noted and addressed in the following sections of the LMP, as outlined below; a) Section 3.1.3 b) Section 3.1.3 c) Section 5.1 d) Sections 3.1.3 e) Section 4.1.2 f) Noted
51	A barrier system must be designed and installed on the surfaces identified in condition 52 to limit the quantity of groundwater flowing into the mine void and to contain leachate over the period of time that the landfilled waste poses a potential environmental risk. The system must be documented in the LEMP. *(EPA GTA)*	Refer to Section 3.1.1 and 4.1.1 of LMP

Relevant Condition	Requirement	Management Plan Reference
52	The Applicant shall install the barrier system on the following surfaces of the mine void wherever these surfaces do not meet the performance requirements of Condition 53: a) the base and the top elevation of the mine void; and b) the localised joints, fracture zones and audits/portals.	Refer to Section 3.1.1 and 4.1.1 of LMP
53	The barrier system must at least achieve the performance of a 900 mm thick re-compacted clay liner with an in-situ coefficient of permeability of less than 10-9 metres per second.	Refer to Section 3.1.1 and 4.1.1 of LMP
54	A Construction Quality Assurance Plan (CQAP) for the barrier system shall be prepared and included in the LEMP.	Noted and addressed in Sections 3.1.3of the LMP
55	The Applicant shall prepare a Leachate Contingency Management Plan (LCMP) that addresses, but not necessarily be limited to the following matters: a) the removal of leachate from the waste and its treatment to remove any metals or compounds at concentrations which may inhibit the biological processes of the bioreactor landfill, prior to discharging the leachate back into the landfilled waste; b) the storage of leachate external to the landfilled waste in the mine void; c) method/s for removing leachate from the waste and disposing of it to ensure effective operation of the bioreactor landfill and to ensure that the groundwater gradient directs groundwater flows into the mine void; d) an estimate of the full costs for implementing each aspect of this plan *(EPA GTA)*; e) contingency measures in the event that the leachate storage dams reach capacity sooner than anticipated, this should include the provision for the construction and operation of additional lined coffer dams in ED1 to the satisfaction of the EPA; and f) contingency measures should the modelling as required by Condition 70G demonstrate that the dams will overflow.	Noted and addressed in LMP as below (a) 3.1.1 and 3.1.2 of LMP (b) 3.1.3 of LMP (c) 4.1.3 of LMP (d) Noted (e) 4.5 of LMP**Error! Reference source not found.** (f) Noted
55A	Prior to operation of the LTP, or as otherwise agreed by the Secretary, the Applicant must submit a revised LCMP to the satisfaction of the Secretary. The LTP is not permitted to operate until the revised LCMP is approved by the Secretary. The plan must be prepared in consultation with the EPA and Water NSW and include contingency measures should the leachate dams fill sooner than anticipated.	Noted
55B	Should additional coffer dam(s) be required to be constructed as part of the LCMP the dam(s) must be designed, constructed and maintained in accordance with Condition 70L to 70P	Noted

Relevant Condition	Requirement	Management Plan Reference
56	The Applicant must not import water or other liquids into the mine void, unless otherwise approved by the EPA, except for first flush waters collected at the Intermodal Facility site and waters contained in ED3. *(EPA GTA)*	Also noted and addressed in Section 3.1.6 of the SWMP
57	The Applicant shall develop a plan (known as bioreactor water management plan) which addresses the treatment of water, prior to any water being added (other than by direct rainfall) to the landfilled waste. This plan shall be included in the LEMP.	Noted and addressed in Section 3.1.6 of the SWMP
Surface Water Management		
58	There must be no discharge of waters from the area subject to the Development Application, unless more than 210mm of rain falls within a 72 hour time period (1 in 100 year ARI of 72 hours duration). *(EPA GTA)*	Noted and addressed in Section 3.1.8 of the SWMP
59	At the commencement of waste being received into the mine void the volume of water stored in ED3 shall be no greater than 40 ML.	Noted
60	The Applicant shall install drainage so that the West Ridge Catchment shall not drain into the mine void.	Noted and addressed in Section 3.1.6.2 of the SWMP
61	Contaminated water shall only be applied for dust suppression in the mine void, and in any areas around the perimeter of the void where any contaminated water will drain back into the void.	Noted and addressed in Section 4.2.7 of the SWMP
62	The evaporation of water by spraying shall not result in the drifting of the sprayed liquid from the area subject to the DA and also shall not cause any adverse impact to public health. The proposed method for the spray evaporation of water shall be documented in the LEMP.	Noted and addressed in Section 4.2.8 of the SWMP Noted and addressed in Section 3.1.5.4 of the LMP
63	ED3 shall not receive water stored in the Waste Rock Dam.	Noted and addressed in Section 3.1.6.3 of the SWMP
64	Stormwater in the mine void must only be discharged into ED3S sump, for transfer via pipeline to ED2, or otherwise used for operational purposes within the landfill, as approved in writing by the EPA. *(EPA GTA)*	Noted and addressed in Section 3.1.6.2 of the SWMP

Relevant Condition	Requirement	Management Plan Reference
65	Stormwater collected in the mine void may only be transferred into ED3S sump and ED2 provided that: a) The Applicant can always comply with condition 58; and b) the stormwater to be transferred contains no leachate, unless otherwise approved in writing by the EPA. *(EPA GTA)*	Noted and addressed in Section 3.1.6 of the SWMP
66	The Applicant must design and implement a Stormwater Management Scheme for the premises demonstrating compliance with Conditions 47, 48, 58, 63, 64, 65, and 8(b). This plan must be documented in the LEMP. *(EPA GTA)*	Noted and included in Section 3.1.6 of the SWMP
66A	Prior to the operation of the LTP or as otherwise agreed by the Secretary, the Applicant must submit a revised Stormwater Management Plan to the satisfaction of the Secretary. The plan must be prepared in consultation with the EPA and Water NSW and include the changes to stormwater management in MOD 2 and MOD 3, in accordance with the requirements of Condition 66.	Noted
66B	Prior to the operation of the LTP or as otherwise agreed by the Secretary, the Applicant must submit a revised Management Plan for ED3N, ED3S, ED3S-S and the Coffer Dam to the satisfaction of the Secretary. The LTP is not permitted to operate until the revised Management Plan is approved by the Secretary. The plan must be prepared in consultation with the EPA and Water NSW and include the chages to water and leachate management in MOD 2 and MOD 3, in accordance with the requirements of Condition 70. The plan must be documented in the LEMP.	Noted
66C	Should any additional coffer dams in ED1 be required, the Applicant must submit revised management plans in accordance with conditions 70 and 70B to the satisfaction of the Secretary prior to any treated leachate being discharged to the coffer dams. The plan must be prepared in consultation with the EPA and Water NSW and be documented in the LEMP.	Noted
67	Vehicles leaving the area subject to the DA shall not track materials to external surfaces. Details of the equipment or facilities must be specified in the LEMP *(EPA GTA)*	Noted and addressed in Section 4.1.3 of the SWMP
68	Containers used for transporting waste must only be washed at the container wash facility as frequently as is necessary to minimise environmental impacts from the containers. The container wash down facility must be designed, installed and operated with the aim to collect, treat and dispose of any wash down waters to the leachate collection system. Any collected solids must be returned to the active tipping face. The container wash down facility must be documented in the LEMP. *(EPA GTA)*	Noted and addressed in Section 3.1.9 of the SWMP.

Relevant Condition	Requirement	Management Plan Reference
69	Impervious bunds must be constructed around all fuel, oil and chemical storage areas and the bund volume must be large enough to contain 110 per cent of the volume held in the largest container. The bund must be designed and installed in accordance with the requirements of the EPA Environment Protection Manual Technical Bulletin *Bunding and Spill Management*. *(EPA GTA)*	Noted and addressed in Section 4.2.6 of the SWMP
ED3N, ED3S and ED3S-S and Coffer Dam(s)– Management		
70	The Applicant must prepare a management plan for ED3N, ED3S, ED3S-S and coffer dam(s), ED1, the LTP and pipeline to ensure that: a) each dam is lined in consultation with Water NSW and to the satisfaction of the EPA and maintained to prevent leakage from the dams in order to protect groundwater and surface water; b) a monitoring and inspection program is implemented including installation of monitoring bores, a review of monitoring data and six-monthly inspections to evaluate the integrity of the barrier and to assess if leakage from the dam is occurring; c) adequate capacity is retained in ED3N, ED3S and coffer dam(s) to meet the environmental performance requirements in condition 58 d) measures are identified to maintain adequate capacity within a suitable time period after receiving water from a rainfall event; e) there is an emergency plan for the management of leachate in excess of the capacity of ED3N,ED3S and coffer dam(s); f) the sources of leachate that are collected or received in ED3N, ED3S and coffer dam(s) are identified; g) the quantity of leachate from each source that reports to ED3is monitored and compared in graphical format with rainfall data; h) ED3N is emptied of effluent from the existing leachate system by 31 December 2022; i) all pipelines which transfer leachate and treated leachate are monitored to ensure leaks do not occur; j) the operational details of the LTP include: (i) the leachate quality targets; (ii) a description of the performance indicators that would be used to judge the performance of the LTP; (iii) a description of the management measures that would be implemented to manage the operational impacts of the LTP including the chemical storage area and sludge skip bin; (iv) contingency measures to manage any unpredicted impacts such as the bioreactor membrane failing; and (v) the roles, responsibility, authority and accountability of all key personnel involved in the environmental management of the LTP. k) An updated plan including MOD 2 and MOD 3 must be documented in the LEMP.	Noted and addressed in LMP and SWMP as below (a) 3.1.3 of LMP (b) Refer to section 5.1.3 of SWMP (c) 4.3 of LMP (d) 4.3 and 4.5 of LMP (e) Section 6 of SWMP (f) 3.1.3 of LMP (g) 5.1.1 of LMP (h) 3.1.3 of LMP (i) 4.2 of LMP (j) (i) 3.1.2.1 of LMP (ii) 3.1.2.1 of LMP (iii) Refer to section 3.4.1 and 4.4.1 of the LEMP (iv) 3.1.2.1 of LMP (v) 2.1 of LMP

Relevant Condition	Requirement	Management Plan Reference
Treated Leachate Storage in ED3S-S		
70A	The Applicant must confirm in writing to the EPA and the Secretary the dam lining is in place (in accordance with Condition 70), prior to the discharge of treated leachate into ED3S-S. From the commencement of MOD 2, the Applicant shall provide quarterly updates to the EPA and the Secretary of the leachate volume in ED3S-S (southern lagoon) and the remaining storage volume.	Noted
ED2 – Management		
70B	The Applicant must prepare a management plan for ED2 to ensure that; a) only mine void stormwater that does not contain leachate and direct rainfall and runoff is received and stored within ED2; b) the dam is lined and maintained to prevent the leakage of stored acid mine drainage waters in order to protect groundwater and surface water; c) a monitoring and inspection program is implemented including installation of monitoring bores, a review of monitoring data and six-monthly inspections to evaluate the integrity of the barrier and to assess if leakage from the dam is occurring; d) adequate capacity is retained in ED2 to meet the environmental performance requirements in condition 58 e) measures are identified to maintain adequate capacity within a suitable time period after receiving water from a rainfall event. f) there is an emergency plan for the management of water in excess of the capacity of ED2; g) the sources of water that are collected or received in ED2 are identified; and h) the quantity of water from each source that reports to ED2 is monitored and compared in graphical format with rainfall data. The plan must be prepared in consultation with the EPA and submitted to the Secretary for approval within two months of the date of approval for MOD 2 or as otherwise agreed by the Secretary. The revised plan shall be documented in the LEMP.	Noted and addressed in the following sections of the SWMP, as outlined below; a) Section 3.1.7 b) Section 3.1.7.2 c) Section 3.1.7.2 d) Section 3.1.7.3 e) Section 3.1.7.3 f) Section 3.1.7.2 g) Section 5.1.1 h) Section 3.1.7.2 Noted and addressed in Section 1.4.1 of the SWMP.
70C	Seepage or leakage points in ED2 must be identified and repaired to the satisfaction of the Secretary and EPA prior to the transfer of any stormwater from ED3S to ED2. *Note: Conditions pertaining to ED2 will be triggered only in the event of transfer of water from ED3S to ED2.*	Noted and addressed in Section 3.1.7 of the SWMP
Long-term Leachate Management		

Relevant Condition	Requirement	Management Plan Reference
70D	The Applicant must develop and implement a Longterm Leachate Management Strategy that; • Minimises the generation of leachate at the premises; • Captures, treats and disposes of all leachate generated at the premises; • Maintains leachate levels in the waste mass to a level that does not inhibit the efficiency of the landfill gas extraction system; • Progressively removed all treated leachate from ED3; and • Minimise the emission of offensive odours from leachate treated and stored onsite so that there is no off site impact. The Longterm Leachate Management Strategy must be submitted to the Secretary and the EPA (for inclusion as a Pollution Reduction Program attached to environment protection license 11436) for approval within two months of the approval date of MOD 2.	Noted.
70E	Treated leachate must not be discharged to any part of ED3S, other than ED3S-S, until such time as the long Term Leachate Management Strategy has been approved by the Secretary and the EPA.	Noted and addressed in Section 3.1.3 of the LMP
70F	The Longterm Leachate Management Strategy must be operational no later than30 September 2018, or as otherwise agreed by the Secretary.	Noted
Future Modelling		
70G	Prior to the operation of the LTP, the Applicant must provide modelling which demonstrates that the evaporation dams will not overflow for the period between 2029 to 2058. Should overflow be predicted, the Applicant must provide contingency measures in accordance with Condition 55A.	Noted and Submitted with DPE on 28 November 2017
Leachate Treatment Plant		
70H	The Applicant must construct the Leachate Treatment Plant (LTP) and associated infrastructure in accordance with the Construction Environment Management Plan prepared by Veolia dated 12 December 2017.	Noted
70I	All run-off during construction must be contained on the site in accordance with Condition 58.	Noted

Relevant Condition	Requirement	Management Plan Reference
70J	The LTP must be: (a) capable of processing at least 4 litres per second of leachate; and (b) bunded to contain 110% of the facilities largest sized tank.	3.1.2.1 and 4.2 of LMP
70K	The sludge skip bin must be bunded and covered to prevent contaminants entering surface water.	4.2 of LMP
Coffer Dam(s)		
70L	Treated leachate must not be discharged to any part of ED1, other than within lined coffer dam(s).	3.1.2.1 of LMP
70M	The coffer dam(s) in ED1 must be designed and constructed: (a) by a suitably qualified and experienced person(s); (b) based on a geotechnical investigation and any recommendations prepared by a suitable qualified person(s); and (c) ensuring that all coffer dams are lined with a High Density Polyehylene liner to the satisfaction of the EPA and in consultation with Water NSW.	Noted
70N	The Applicant must provide works-as-executed drawings signed by a registered surveyor demonstrating that the coffer dam(s) have been constructed in accordance with the design required by Condition 70M. The Applicant must submit the works-as-executed drawings to the EPA, Water NSW and Secretary prior to the discharge of treated leachate into the coffer dam(s).	Noted
70O	Prior to the discharge of treated leachate into any coffer dam(s) in ED1, the Applicant must confirm in writing and provide a quality assurance report to the EPA, Water NSW and the Secretary that the High Density Polyethylene dam lining has been adequately installed. From the commencement of discharge of treated leachate into the coffer dam(s), the Applicant shall provide quarterly updates to the EPA, Water NSW and the Secretary of the leachate volume in the coffer dam(s) and the remaining leachate storage volume.	Noted
70P	Prior to the discharge of treated leachate to any coffer dam(s), the Applicant must install a leack detection system which monitors flows along all pipelines which carry leachate. Any leaks must be investigated, contained and rectified.	4.2 of LMP
70Q	Only treated leachate from the LTP is permitted to be stored within coffer dam(s) in ED1, unless otherwise agreed to by the Secretary.	3.1.2.1 of LMP

Relevant Condition	Requirement	Management Plan Reference
70R	The coffer dam(s) are not permitted to exceed 80 per cent capacity until either: (a) a new coffer dam has been designed and constructed in accordance with condition 70M to 70P and is ready to accept treated leachate from the LTP and a revised management plan has been submitted to the satisfaction of the Secretary in accordance with Condition 70; or (b) sections of ED3N have been emptied of partially treated leachate, had its liner assessed and , if necessary, repaired, and is capable of receiving treated leachate from the LTP.	4.3 of LMP
70S	No interaction between the treated leachate in the coffer dam(s) and the mine stormwater in ED1 is permitted.	3.1.8 of SWMP
70T	Within six months of commissioning the LTP and annually thereafter, unless otherwise agreed to by the Secretary, the Applicant shall commission and pay the full cost of an independent assessment of the leachate and water management system. This audit must be conducted by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Secretary. During the audit, this expert must: (a) consult with the EPA, Water NSW and the Secretary; (b) assess actual performance against the assumptions and predictions made in the project water balance prepared by WSP dated September 2017. This must include: (i) actual versus predicted inputs and outputs into and out of each dam; (ii) actual versus predicted mechanical evaporation from each dam; (iii) actual versus predicted rainfall and evaporation; and (iv) the actual versus predicted volume of water or treated leachate stored in each dam. (c) assess actual versus predicted performance of the LTP. This must include: (i) actual versus target effluent quality; and (ii) actual versus target throughput. (d) determine whether the leachate and water management system is achieving its intended objectives; and (e) outline all reasonable and feasible measures that may be required to improve water and leachate management at the site.	5.2 of LMP and 5.1.3 of LEMP
ED1		

Relevant Condition	Requirement	Management Plan Reference
70U	The volume of mine water stored in ED1 must be no more than 10ML by 31 December 2023.	3.1.8.1 of SWMP
ED3N		
70V	ED3N must be emptied of effluent from the existing leachate system by 31 December 2022.	3.1.3 of LMP
70W	Prior to discharging treated leachate into sections of ED3N from the LTP, the Applicant must verify the integrity of the dam and prepare an integrity assessment of the ED3N liner to demonstrate the dam is not leaking and is suitable for the storage of treated leachate.	Noted
70X	Should the integrity assessment identified in Condition 70W find that the liner in ED3N is not adequate for treated leachate storage, the Applicant must submit management options to the Secretary, the EPA and Water NSW which will be adopted to rectify any integrity issues.	Noted
70Y	The Applicant must not store treated leachate from the LTP in ED3N until the Secretary and the EPA are satisfied that either ED3N is not leaking or the management options identified in Condition 70X are acceptable.	Noted
Waste-water Management		

Condition Compliance Report

Relevant Condition	Requirement	Management Plan Reference
71	The sewage management system must be designed, installed and operated to meet the following criteria: a) **Prevention of Public Health Risk.** Unacceptable public health risks must not occur resulting from human contact with the waste-water or flows discharged from the waste-water management system. Indicator faecal coliforms must be reduced to acceptable levels by an acceptable disinfection method determined in consultation with the EPA and NSW Department of Health. Consultation must be undertaken with NSW Health on the performance of the system. b) **Protection of Lands.** The application of waste-water to land must not result in the deterioration of the quality of the land through soil structure degradation, salinisation, waterlogging, chemical contamination or soil erosion. c) **Protection of Surface Waters**. Surface waters must not become d) contaminated by any flows discharged from the waste-water management system including waste-water, rainfall runoff, contaminated subsurface runoff or contaminated groundwater. e) **Protection of Groundwaters**. Underground water resources must not f) become contaminated by either the waste-water, or any flows discharged from the waste-water management system. g) **Community Amenity**. Unreasonable interference and nuisance to the public, due to odour, dust, insects, and noise above existing background levels and arising from the operation of the waste-water management system must be avoided. h) **Resource Utilisation**. The useful resources of waste-water, including nutrients, organic matter and water must be identified and utilised to the maximum extent possible within the bounds posed by the other environmental and health performance criteria referred to in (a) to (e) above. *(EPA GTA)*	Noted and addressed in Section 3.1.8 of the AQGGMP Noted and addressed in Section 3.1.18 of the SWMP
72	Waste-water must only be applied to utilisation areas in conformance with Condition 71. *(EPA GTA*	Noted
73	Spray from waste-water application must not drift beyond the boundary of the waste-water utilisation area to which it is applied. *(EPA GTA)*	Noted
74	Waste-water utilisation areas must effectively utilise the waste-water applied to those areas. This includes the use for pasture or crop production, as well as ensuring the soil is able to absorb the nutrients, salts, hydraulic load and organic materials in the solids or liquids. Monitoring of land and receiving waters to determine the impact of waste-water application may be required by the EPA. *(EPA GTA)*	Noted

Relevant Condition	Requirement	Management Plan Reference
Intermodal Facility Site		
75	The Applicant shall prepare and implement a Stormwater Management Scheme for the premises in accordance with the environment protection licence. The Scheme shall include measures to mitigate the impacts of stormwater run-off from and within the premises following the completion of construction activities and meet Condition 76 *(EPA GTA)*	Refer to PA condition 4 of schedule 7
76	Container handling, transfer and storage areas including any hardstand areas must be paved and sealed and be provided with a first flush stormwater management system designed to capture 15mm of stormwater for each square meter of catchment area. The paved and sealed areas including first flush system must also extend to include any rail unloading areas, stormwater detention pond, oil/water separator and container loading areas. *(EPA GTA)*	Noted and addressed in Section 3.4.2.3 of the IMF EMP
77	There must be no discharge of contaminated stormwater from the premises under dry weather conditions or storm event(s) of less than 1:100 year, 24 hour duration, average recurrence interval. *(EPA GTA)*	Noted and addressed in Section 3.4.2.3 of the IMF EMP
78	All areas that involve the handling of containerised waste including container transfer and handling areas, clean container storage areas and internal roadways must be sealed. *(EPA GTA)*	Refer to the section 3.4.2 of the IMF EMP
Waste Water Management		
79	Contaminated stormwater and any sludges collected at the Crisps Creek intermodal facility must be disposed of at the landfill site. *(EPA GTA)*	Refer to PA condition 2 of schedule 5
80	There must be no vehicle or container wash down at the premises. *(EPA GTA)*	Refer to PA condition 11 of schedule 5
81	The on-site sewerage waste water management system must be designed installed and operated in a manner consistent with the guidelines Environment and Health Protection for On-site Sewage Management for Single Households. *(EPA GTA)*	Refer to PA condition 12 of schedule 5
Rivers and Foreshore Improvement Act 1948 – Part 3A Permit (DPI-Water GTAs)		
General		

Relevant Condition	Requirement	Management Plan Reference
82	If any work is being carried out in such a manner that it may damage or detrimentally affect the stream, or damage or interfere in any way with any work, the operation on that section of the stream shall cease immediately upon the oral or written direction of the officer.	Noted
83	The Applicant may request in writing any reasons for any direction to cease operations which must be provided within 24 hours of such a request.	Noted
84	If the permit conditions have been breached, the permit holder shall restore the site to the satisfaction of the Department. If the necessary works are not completed then the permit holder shall pay a fee prescribed by the Department for the initial breach inspection and all subsequent breach inspections.	Noted
85	Operations shall be conducted in such a manner as not to cause damage or increase the erosion of adjacent stream banks. The permit holder shall carry out any reasonable instructions given by DPI-Water with a view to preventing damage to the banks.	Noted
86	Any vegetation or other material removed from the area of operations shall be disposed of to an appropriate site where the debris cannot be swept back into the river during a flood.	Noted
Conditions Specific to the DA		
87	Operations shall be conducted in such a manner that is in accordance with the permit as not to cause damage or increase the erosion of adjacent stream banks. The permit holder shall carry out any reasonable instructions given by DPI-Water with a view to preventing damage to the banks.	Noted
88	Prior to the commencement of construction, the Applicant shall submit for the approval of DPI-Water a Soil and Water Management Plan. The Plan shall be prepared by a suitably qualified person and shall cover all works in and near the stream, staging and maintenance requirements. The Plan shall meet the requirements outlined in the NSW Department of Housing's publications (1998) *Managing Urban Stormwater: Soils and Construction* and *Managing Urban Stormwater: Treatment Techniques.*	Noted
89	The Applicant shall establish, to the satisfaction of DPI-Water, a riparian zone on the intermodal facility side of the Mulwaree River for the length of the intermodal facility and any associated works. The riparian zone shall be at least 40 metre in width (measured horizontally from the top of the bank) and consist of local native plant species but shall exclude bridge approaches, bridge, access roads and associated infrastructure in accordance with the Intermodal Construction Works Plan, and Soil and Water Management Plan	Noted

Relevant Condition	Requirement	Management Plan Reference
90	No exotic trees are to be planted within the stream or within 40 metres from the top of the bank of the stream.	Noted
91	Prior to commencing construction works the Applicant shall prepare to the satisfaction of DPI-Water a "Works Plan" to include Stream Rehabilitation and Vegetation Management. The Plan shall describe the proposed rehabilitation of the stream wherever disturbed, methods to stabilise the bed and banks of the stream, vegetation to be retained, additional plantings of local native vegetation, vegetation maintenance and performance criteria	Noted
92	The Applicant shall ensure that the design of the bridge over the Mulwaree River is sensitive to the corridor functions (including current and future functions) of the river and piered approaches or equivalent are to be incorporated into the design.	Noted
93	Drainage lines to the Mulwaree River are to be in accordance with the requirements of DPI-Water and designs included in the Intermodal Facility Works Plan are to be approved by DPI-Water prior to the commencement of construction works.	Noted
NOISE		
Hours of Construction and Operation		
Construction		
94	All construction work at the waste management facility and intermodal facility site that creates audible noise at residential premises must only be conducted between 7:00 am to 6:00 pm on Mondays to Fridays and between the hours of 8:00 am to 1:00 pm on Saturdays. There shall be no construction activities on Sundays or public holidays. *(EPA GTA)*	Noted
95	The delivery of material outside the hours of operation permitted by Condition 94 may take place if that delivery is required by police or other authorities for safety reasons; and/or because the operation, personnel or equipment are endangered. In such circumstances, prior notification is to be provided to the EPA and affected residents as soon as possible, or within a reasonable period in the case of an emergency. *(EPA GTA)*	Noted

Relevant Condition	Requirement	Management Plan Reference
96	The hours of construction specified in Condition 94 may be varied with the written consent of the EPA if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected. *(EPA GTA)*	Noted
Operation		
97	All operational activities at the waste management landfill site may only be conducted between the hours of 6:00am and 7:00pm on Mondays to Saturdays and at the intermodal facility site including road haulage, may only be conducted between the hours of 7:00am to 6:00pm on Mondays to Saturdays other than train operations which may be conducted from 6:00am to 6:00pm. There must be no activities on Sundays, Good Friday or Christmas Day (Commission of Inquiry Report, January 2000). *(EPA GTA)*	Refer to PA Condition 20 of Schedule 4
98	The hours of operation specified in Condition 97 may be varied with the written consent of the EPA if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected. *(EPA GTA)*	Refer to PA Condition 20 of Schedule 4
Noise Limits		
Waste Management Facility Site		
99	Noise from the premises must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) LA10 (15 minute) at the most affected residential receiver. *(EPA GTA)*	Refer to PA Condition 19 of Schedule 4
100	The noise emission limits identified in Condition 99 apply for prevailing meteorological conditions, except under conditions of temperature inversions. Noise impacts that may be enhanced by temperature inversions must be addressed by: a) documenting noise complaints received to identify any patterns of temperature b) inversions or increased level of impacts from temperature inversions; c) where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under conditions of temperature inversions should be developed and implemented. *(EPA GTA)*	Refer to PA Condition 21 of Schedule 4
Intermodal Facility Site		

Relevant Condition	Requirement	Management Plan Reference
101	Except as provided in Condition 102, noise from the premises must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) at the most affected residential receiver. *(EPA GTA)*	Refer to PA Condition 15 of Schedule 5
102	Noise emissions from freight trains entering and leaving the premises must not exceed the noise limit of 45 dB(A) LA10 (15 minutes) prior to 7am and 50 dB(A) LA10 (15 minutes) after 7am. These limits apply only where there are no more than two freight trains entering and leaving the premises per day, otherwise the limit in condition 101 applies. *(EPA GTA)*	Refer to PA Condition 16 of Schedule 5
103	Noise from the premises is to be measured at the most affected residential receiver to determine compliance with Conditions 101 and 102. *(EPA GTA)*	Noted
104	The noise emission limits identified in conditions 101 and 102 apply for prevailing meteorological conditions, except under conditions of temperature inversions. Noise impacts that may be enhanced by temperature inversions must be addressed by: a) documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions; and b) where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under conditions of temperature inversions should be developed and implemented. *(EPA GTA)*	Noted
Noise Management		

Relevant Condition	Requirement	Management Plan Reference
105	The Applicant shall prepare and implement a Road Traffic Noise Management Protocol. The Applicant shall aim to meet the noise criteria set out in the EPA's *Environmental Guidelines for Road Traffic Noise*. The Protocol shall include, but not necessarily be limited to details about: a) scheduling movements outside critical time periods (for example, 6:00am to 7:00am); b) more stringent limits for noise emission from vehicles (eg. using specially designed "quiet" trucks and/or trucks required to use air bag suspension); c) driver education; d) limiting usage of exhaust brakes; e) type of road surface; f) in consultation with Mulwaree Shire Council exploring opportunities to reduce speed limits for trucks; g) regular maintenance of road surface; h) ongoing community liaison to monitoring complaints; and i) phasing in the increased road use; and j) options for overnight parking of haulage trucks.	Noted
106	The Applicant, with input from the rail service provider, shall prepare and implement an Operational Noise Management Protocol for the Intermodal facility. The Protocol shall include, but not necessarily be limited to details about: a) the incorporation of all reasonable and feasible noise mitigation methods for trains entering the site from the main line, shunting, rail movements on site, container movements, and truck movements; b) scheduling of train movements outside critical time periods; c) using the quietest trains possible; d) employee education; e) using quiet couplings for trains f) using quiet forklifts; g) regular maintenance of rail track, roads, hard stand areas, equipment; h) ongoing community liaison to monitoring complaints (eg. complaints line); and i) negotiated agreements for noise complaints if noise issues become unresolvable.	Noted

Relevant Condition	Requirement	Management Plan Reference
107	A Construction Noise Management Protocol must be prepared and submitted with the LEMP and implemented by the Applicant. The Protocol must include but is not necessarily limited to details about: a) compliance standards; b) community consultation; c) complaints handling monitoring/system; d) site contact person to follow up complaints; e) mitigation measures; f) the design and operation of the proposed mitigation methods demonstrating g) best practice; h) construction times; i) contingency measures where noise complaints are received; and j) monitoring methods and programs.	Noted
NOISE IMPACTS		
Consultation with Pylara Pty Ltd		
108	In the event that Pylara Pty Ltd considers that road traffic noise (relating to the subject development) at any dwelling on its property is in excess of relevant noise criteria set out in this consent, the Applicant shall, upon a written request from Pylara: a) undertake direct consultation with Pylara Pty Ltd on the issues raised; b) make arrangements for and fund an independent noise investigation to c) quantify noise levels and sources; and d) if adverse impacts are identified, modify where practicable road transport operations in order to mitigate such impacts.	Noted
Land Acqusition		

Relevant Condition	Requirement	Management Plan Reference
109	Within six months of receipt of a written request from Pylara Pty Ltd (ACN 000 077 672), the Applicant shall purchase the whole of the property known as “Pylara”, via Tarago. The request may be made at any time after this approval, despite any other conditions. The purchase, including acquisition price, shall be on the terms agreed between the Applicant and Pylara Pty Ltd. The acquisition price shall be fair and reasonable, shall take into account all relevant matters, and shall, at least, include payment for: a) a sum not less than the current market value of Pylara Pty Ltd’s interest in i. Pylara at the date of this consent, having regard to: ii. the existing use and permissible use of the land in accordance with the applicable planning instruments at the date of the written request; and iii. the presence of improvements at Pylara and/or any Council approved iv. building or structure which although substantially commenced at the date of request is completed subsequent to that date; and v. as if Pylara was unaffected by the Applicant’s Development Proposal. b) reasonable compensation to Pylara Pty Ltd for disturbance allowance and relocation costs within the Mulwaree Shire, or within such other location as may be determined by the Secretary in exceptional circumstances; and c) Pylara Pty Ltd’s reasonable costs for obtaining legal advice and expert witnesses for the purposes of establishing the acquisition price of Pylara and the terms upon which Pylara Pty Ltd is seeking for it to be acquired.	Noted
110	In the event that the Applicant and Pylara Pty Ltd cannot agree within three months upon the acquisition price of Pylara and/or the terms upon which it is to be acquired under the terms of this consent, then: a) either party may refer the matter to the Secretary, who shall request the President of the Australian Property Institute to appoint a qualified independent valuer or Fellow of the Institute, who shall determine, *after consideration of any submissions from the owner’s and the Applicant, a fair and reasonable* acquisition, price for Pylara as described in sub-clause (a) and/or terms upon which it is to be acquired; b) in the event of a dispute regarding outstanding matters that cannot be resolved, the independent valuer shall refer the matter to the Secretary, recommending the appointment of a qualified panel. The Secretary, if satisfied that there is a need for a qualified panel, shall arrange for the constitution of the panel. The panel shall consist of: (i) the appointed independent valuer,	Noted

Relevant Condition	Requirement	Management Plan Reference
	(ii) the Secretary or nominee, and (iii) the president of the Law Society of NSW or nominee. c) The qualified panel shall advise the independent valuer on the outstanding matters that the independent valuer refers for its consideration, following which the independent valuer shall determine a fair and reasonable acquisition price as described in condition 109 and/or the terms upon which Pylara is to be acquired.	
111	The Applicant shall bear the costs of any valuation or survey assessment requestedby the independent valuer, panel or the Secretary.	Noted
112	The Applicant shall, within fourteen days of receipt of a determination by the independent valuer, offer in writing to Pylara Pty Ltd to acquire the relevant land at a price no less than the said acquisition price as determined, and upon any terms set out by the independent valuer.	Noted
AIR QUALITY		
Odour		
Waste Management Facility Site		
113	There shall be no offensive odour emitted from the premises, in accordance with Section 129 of the Protection of the Environment Act 1997, nor emissions to the atmosphere from the landfill that may adversely affect the health or amenity of the community. *(EPA GTA)*	Noted and addressed in Sections 3.2.1 & 3.2.2 of the AQGGMP
114	A meteorological station shall be installed and operated on the landfill site in accordance with the following Australian Standards: a) AS 2922-1987 Ambient air – Guide for the siting of sampling units; and b) AS 2923-1987 Ambient air – Guide for measurement of horizontal wind for air quality applications. The meteorological station shall measure and electronically log wind speed, wind direction, ambient temperature, sigma theta (standard deviation of the horizontal wind direction fluctuation), solar radiation. All parameters must be logged at 15 minute intervals to provide 1-hour average values and the station must be able to provide instantaneous wind speed and direction to assist in investigation of complaints.	Refer to PA Condition 22 of Schedule 4

Relevant Condition	Requirement	Management Plan Reference
	The meteorological station shall also measure rainfall and evaporation. *(EPA GTA)*	
Intermodal Facility Site		
115	There shall be no offensive odour emitted from the premises, in accordance with Section 129 of the Protection of the Environment Act 1997. *(EPA GTA)*	Refer to PA Condition 8 of Schedule 5
Dust		
Waste Management Facility Site		
116	Activities occurring on the waste management facility site during the construction and operational phases must be carried out in a manner that will minimise emissions of dust from the premises. *(EPA GTA)*	Noted and addressed in Section 4.2 the AQGGMP
117	The Applicant must take all practical steps to manage dust emissions during the construction and operational phase of the waste management facility to minimise off-site impacts of total suspended particulates, lead and dust deposition. *(EPA GTA)*	Noted and addressed in Section 4.2 the AQGGMP
118	The LEMP must detail a system to prevent and suppress all dust emissions to meet the requirements in conditions 116 and 117. *(EPA GTA)*	Noted and addressed in Section 4.2 the AQGGMP
119	Trucks which are entering and leaving the premises and carrying loads must be sealed or covered at all times, except during loading and unloading. *(EPA GTA)*	Noted and addressed in Section 4.1 the AQGGMP
120	All internal permanent roadways between the container transfer area and Collector Road must be sealed. *(EPA GTA)*	Noted and addressed in Section 4.2 the AQGGMP
121	All sealed surfaces intended to carry vehicular traffic must be managed to minimise the quantity of wind blown dust emissions. *(EPA GTA)*	Noted and addressed in Section 4.2 the AQGGMP
122	All unsealed roads must be treated so that there are no visible dust emissions. Details of treatment measures	Noted and addressed in Section

Relevant Condition	Requirement	Management Plan Reference
	must be documented in the LEMP.	4.2 the AQGGMP
123	A progressive rehabilitation strategy must be prepared and implemented for any unsealed areas of the site to prevent both wind blown dust emissions and contaminated stormwater runoff. This strategy must be documented in the LEMP. *(EPA GTA)*	Noted and addressed in Section 4.2.1 the AQGGMP
Intermodal Facility Site		
Construction and Operational Phases		
124	Activities occurring at the premises must be carried out in a manner that will minimise emissions of dust from the premises. *(EPA GTA)*	Noted
125	The Applicant shall prepare a dust management plan that outlines measures to prevent wind blown dust. The dust management plan must be included as a component of the LEMP. The dust management plan must specify measures to prevent wind blown dust during the construction and operational phases.*(EPA GTA)*	Refer to PA Condition 4 of Schedule 7
126	Trucks entering and leaving the premises that are carrying excavated dusty Ambient Air Quality Monitoring Plan materials including clays, sands and soils must be covered at all times, except during loading and unloading. *(EPA GTA)*	Refer to PA Condition 4 of Schedule 7
127	All sealed and unsealed surfaces shall be managed to minimise the quantity of wind blown dust emissions. *(EPA GTA)*	Refer to PA Condition 4 of Schedule 7
ENVIRONMENTAL MONITORING (EPA GTAs)		
Waste Management Facility Site		
Odour Monitoring		
128	The Applicant must prepare and implement an odour monitoring plan. The plan must be developed in consultation with the EPA and documented in the LEMP.	Refer to PA Condition 22 of Schedule 4
Ambient Air Quality Management		

Relevant Condition	Requirement	Management Plan Reference
129	The Applicant must prepare and implement an ambient air quality-monitoring plan. The ambient air quality-monitoring plan must be documented in the LEMP. The plan must address but may not necessarily be limited to the following: a) Monitoring methodologies and standards; b) Monitoring for concentrations of total suspended particulates (TSP), lead and c) dust deposition rates; d) Locations where monitoring will be carried out; e) Detailed monitoring cycle and the duration of each monitoring cycle; and f) Reporting. Monitoring is to be carried out in accordance with *Approved Methods for the Sampling and Analysis of Air Pollutants* NSW December 1999, or other methods stipulated in the EPL.	Refer to PA Condition 22 of Schedule 4
Landfill Gas Monitoring		
130	The Applicant must prepare and implement a system of monitoring surface and subsurface landfill gas concentrations. Details of the surface and subsurface landfill gas monitoring system must be documented in the LEMP. At a minimum, landfill gas shall be monitored for methane, carbon dioxide, and\ oxygen. The EPL may require other substances to be monitored.	Noted and addressed in Section 5.1 the AQGGMP
Groundwater Monitoring		

Relevant Condition	Requirement	Management Plan Reference
131	The Applicant shall prepare and implement a groundwater monitoring program that can detect groundwater flow and direction and any occurrence of groundwater pollution. The groundwater monitoring program must be documented in the LEMP. The program must include details on: a) location of bore holes around the perimeter of the mine void, ED3 and the coffer dam(s) – including the depth at which they are screened to enable access of groundwater; b) monitoring the height of the groundwater table; c) monitoring the groundwater gradient and to determine the direction of groundwater flow; d) monitoring methodologies and standards to be employed; e) reporting and assessment of results; f) opportunities to integrate the monitoring program with other monitoring programs in the vicinity; g) the parameters and substances that are proposed to be monitored, including sampling and analysis frequencies; and h) groundwater height should be reported against water table contours around the site to assess any variation over time.	Refer to PA Condition 17 of Schedule 4
Surface Water Monitoring		
132	The Applicant shall prepare and implement a surface water-monitoring program to monitor the environmental performance of the construction, operation and rehabilitation of the development on surface water. The surface water-monitoring program must be documented in the LEMP. The program must include details on: a. Monitoring locations including: i. Crisps Creek ; ii. Allianoyonyiga Creek; iii. Coffer dam(s); iv. ED1; v. ED3N; vi. ED3S; vii. ED3S-S; viii. ED2; ix. downstream receiving waters of ED2; x. all treated leachate effluent discharge lines;	Refer to PA Condition 18 of Schedule 4 (Refer to Section 5 of the SWMP & LMP) a) 5.1.1 of SWMP b) 5.1 of SWMP c) 5.1 of SWMP d) noted e) 5.1 of SWMP f) Section 5 of SWMP

Relevant Condition	Requirement	Management Plan Reference
	xi. discharge line from ED3S to ED2; and xii. rainwater collected in the mine void; b. monitoring methodologies and standards to be employed; c. monitoring frequency based on rainfall events and creek flow assessment; d. an assessment of the contribution of surface water pollution from the Woodlawn Waste Management Facility as distinct from the Woodlawn Mine site; e. the quantity of water relocated from the mine void into ED3; f. the quantity of water relocated from ED3 into the mine void; g. the chemical composition of liquids added to the landfilled waste; h. the chemical composition of treated leachate in the effluent discharge line and the coffer dam; i. the chemical composition of leachate within ED3S-S; j. the quantity of water that reports to ED3 , including its sources; k. the quantity of water removed and/or discharged from ED3, including its destination; l. the total quantity of water contained in ED3; m. the quantity of water transferred from ED3S into ED2 n. the quantity of water that reports to ED2 from Woodlawn Waste Management Facility including its sources; o. the total quantity of water contained in ED2; p. the total quantity of treated leachate contained in the coffer dam(s); q. the total quantity of water contained in ED1; r. the parameters and substances that are proposed to be monitored, including sampling and analysis frequencies; s. reporting and assessment of results; and t. opportunities to integrate the monitoring program with other monitoring programs in the vicinity. The monitoring of ED2 will initially be at weekly intervals once the transfer of stormwater from ED3S to ED2 has commenced and will be reviewed 12 months after commencement of MOD 2.	g) 5.1.3 of the LMP h) 5.1.3 of the LMP i) 5.1.3 of LMP j) 3.1.3 and 5.1.3 of LMP k) 3.1.3 and 5.1.3 of LMP l) 3.1.3 and 5.1.3 of LMP m) Not triggered n) Not triggered o) Not triggered p) 5.1.3 of LMP q) 5.1.3 of LMP r) 5.1.3 of LMP s) 5.2 of LMP t) noted
Leachate Monitoring		

Relevant Condition	Requirement	Management Plan Reference
133	The Applicant shall prepare and implement a leachate quality and quantity monitoring program. The program must be documented in the LEMP. The program must include details on: a) monitoring locations; b) monitoring methodologies and standards to be employed; c) monitoring frequency d) the height of the saturation level in the waste; e) the parameters and substances which are proposed to be monitored (eg redox potential, metals); and f) reporting and assessment of results.	Noted and addressed in Section 5.1.3 of the LMP
134	The Applicant shall notify the EPA as soon as practicable after becoming aware that the height of the saturation level in the waste is above the height of the groundwater table that surrounds the mine void.	Noted and addressed in Section 1.4.1 of the SWMP. Noted
Environmental Performance of the Bioreactor Landfill		
135	A Bioreactor Performance Monitoring Program (BPMP) must be developed and implemented which will: a) assess the efficiency of the decomposition of the landfilled waste; b) assess the optimum leachate recirculation program; c) assess the optimum water injection program; d) assess the effect of the saturation depth of the leachate on bioreactor performance; and e) assess the quantity of methane and carbon dioxide (and the relative proportions) that are emitted by the biological decomposition of the landfilled waste; The BPMP must also include monitoring of the quantity of rainwater that passively infiltrates into the landfilled waste, the quantity and chemical composition of water that is deliberately added to the landfilled waste, and the quantity of leachate in the landfilled waste. The Bioreactor Performance Monitoring Program must be documented in the LEMP.	Refer to the existing BPMP
Noise Monitoring		
136	Noise levels must be monitored to confirm performance and to assess compliance with Condition 99, A noise-monitoring program must be developed and implemented. The noise-monitoring program must be submitted to	Refer to PA Condition 21 of Schedule 4

Relevant Condition	Requirement	Management Plan Reference
	the EPA for review. The program must be documented in the LEMP. The program must include details on: a) methodologies for noise monitoring; b) location of noise monitoring; and c) frequency of noise monitoring.	
Geo-technical Stability		
137	The geo-technical stability of the premises must be monitored in accordance with the recommendations of the report prepared by BFP Consultants P/L dated 17 December 1998, titled *Woodlawn Landfill – Geo-technical Study*. The monitoring program must be documented in the LEMP. Reporting	Noted
138	The Applicant must provide an annual return to the EPA in relation to the development as required by any licence under the POEO Act 1997 in relation to the development. In the return, the Applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable. If load based fees apply to the activity the Applicant will be required to submit load-based fee calculation work-sheets with the return.	Noted
Intermodal Facility Site		
Water Monitoring Program		
139	A surface water-monitoring program must be developed and implemented. The program must include details on but need not necessarily be limited to the following: a) monitoring locations including: i. Crisps Creek ; ii. Mulwaree River; and iii. the bypass from the first flush structure(s); b) the monitoring methodologies and standards to be employed; c) monitoring frequency based on rainfall event and creek flow assessment; d) the quantity of water collected weekly in the first flush structure;	Noted and addressed in Section 5.3.2 of the IMF EMP

Relevant Condition	Requirement	Management Plan Reference
	e) reporting and assessment of results; f) the parameters and substances which are proposed to be monitored; and g) (g) opportunities to integrate the monitoring program with other monitoringprograms in the vicinity. The monitoring program must be documented in the LEMP.	
Noise Monitoring		
140	Noise levels must be monitored to confirm performance and to assess compliance with Conditions 100 and 101. A noise-monitoring program must be developed and implemented. The program must include details on: a) methodologies for noise monitoring; b) location of noise monitoring; and c) frequency of noise monitoring. The monitoring program must be documented in the LEMP.	Superseded by PA schedule 4 condition 21 Superseded by PA Schedule 5, Condition 15
ROADWORKS		
141	Prior to the commencement of construction, the Applicant shall undertake and submit to Council a detailed pavement analysis on the affected sections of Main Road 268 (Bungendore Road) and Collector Road. The Applicant shall fund any necessary rehabilitation work identified in the pavement analysis.	Noted
142	The Applicant shall fund and provide on Main Road 268 (Bungendore Road) a minimum bitumen sealed width of 9.0 metres, incorporating marked fog lines and centre-line as well as any required bus stops.	Noted
143	The intermodal facility access road shall be constructed in accordance with Auspec specifications and shall have a 7.0 metre wide sealed bitumen pavement for two way roads and 5.0 metres on one way roads.	Noted

Relevant Condition	Requirement	Management Plan Reference
144	In accordance with the "Mulwaree Section 94 Contributions Plan", the Applicant shall provide a financial contribution to Council towards extraordinary road damage accept as may be waived by Council. The contribution is to be paid quarterly in arrears.	Noted
145	Prior to the commencement of landfilling operations, the Applicant shall fund and undertake to the satisfaction of Council and the Roads and Traffic Authority the following works: a) rehabilitation of the pavement at the intersection of Bungendore and Collector Roads; b) provision of a right turn bay at the intersection of Bungendore and Collector Roads for south-bound traffic turning into Collector Road; c) construction of a right turn bay on Bungendore Road for right-turning traffic into the Intermodal Facility (MSC GTA); and d) paving of the following areas with an asphalt concrete overlay; i. intersection of the Intermodal access road and Main Road 268 ii. intersection of Main Road 268 and Collector Road iii. intersection of the Collector Road and the access road to the landfill site.	Noted
146	The access point to the Intermodal Facility at Bungendore Road shall be constructed to a design and standard to the Roads and Traffic Authority (RTA) and Council specifications and shall have a minimum sight distance of 225 metres in both directions. *(MSC GTA)*	Noted
147	The access point to the Waste Management Facility site at Collector Road shall be constructed to accommodate B-doubles. *(MSC GTA)*	Noted
148	The Applicant shall liaise with Council in relation to upgrading the existing warning signposting at the junction of Bungendore and Collector Roads to better inform through traffic of the side road junction and turning trucks. *(MSC GTA)*	Noted
LANDSCAPING AND VEGETATION MANAGEMENT		

Relevant Condition	Requirement	Management Plan Reference
149	The Applicant shall prepare a Landscaping and Vegetation Management Plan for both the Waste Management Facility and Intermodal Facility sites. The Plan shall be prepared by a suitably qualified person and shall address, but not be limited to, the following matters: a) details of likely vegetation loss, means to minimise such loss and additional tree planting to offset this loss; b) proposed plant species; and c) details on landscaping treatment at the intermodal facility site, with particular attention to minimising the visibility of the facility from residences and public vantage points.	Superseded By PA condition 23 of the Schedule 4
150	The Plan shall be prepared to the satisfaction of the Secretary and Council and shall be submitted at least three months prior to the commencement of landfilling operations.	Noted
AGRICULTURAL RISKS		
151	The Applicant shall prepare to the satisfaction of NSW Agriculture a contingency plan for agricultural risks in the event of an incident such as an accident during the transportation of waste from Sydney.	Noted
152	As part of the LEMP, the Applicant shall prepare a plan to manage pests, diseases, vermin, and declared noxious weeds. The plan shall also address measures to manage bird pests in order to minimise the risk of any transfer of contaminants from the waste management facility site to regional waterways and water supply reservoirs. The plan shall also address the recommendations of the report prepared by Kinsella Consulting entitled *"Potential for Transport of Pests and Diseases of Plants and Animals from North Sydney to Tarago in Municipal Wastes"*, dated February 1999 and included as Appendix L of the EIS. *(EPA GTA)*	Superseded By PA condition 24 of the Schedule 4
FLORA AND FAUNA		
Terrestrial Flora and Fauna		

Relevant Condition	Requirement	Management Plan Reference
153	The Applicant shall consult with OEH on measures to conserve the population of the vulnerable orchard (*Diuris aequalis* – Buttercup Doubletail) in retained natural woodland on land within the Woodlawn mine site that is subject to the DA or areas potentially affected by the operation of the waste management facility.	Noted and addressed in Section 4.1.7 of Landscape and Vegetation Management Plan (LVMP)
Aquatic Flora and Fauna		
154	The Applicant shall consult NSW Fisheries prior to the commencement of any works (including, but not limited to channel realignment, dredging, reclamation, culverts, road crossings, pipelines and weirs) in or adjacent to aquatic habitats.	Noted
155	The Applicant shall undertake all practicable measures to maintain and, where possible, enhance existing habitat features in the Mulwaree River and Crisps Creek, including gravel beds, riffles, pools, snags and aquatic and riparian vegetation.	Noted
156	The Applicant shall, in consultation with NSW Fisheries, ensure that the bridge from the Intermodal Facility over Mulwaree River is designed so that fish passage, instream flow and stream bed continuity are maintained.	Noted
HERITAGE AND ARCHAEOLOGY		
Aboriginal Heritage		
Note; The Applicant has been given Consent to Destroy for sites Crisps Creek 1 and 2, Tarago, NSW under section 90 of the National Parks and Wildlife Act 1974. Artefacts from Crisp Creeks sites 1, 2 and 4 have been salvaged, in accordance with the conditions NPWS Permit #SCHU 0071.		
Non-Aboriginal Heritage		
157	In the event that any items potentially of non-Aboriginal heritage significance are identified on the subject land during the carrying out of works, the Applicant shall arrange for a suitably qualified archaeologist to inspect the item/s, determine the level of significance of the item/s and advise on appropriate management measures.	Noted and addressed in Section 3.1.7 of the LVMP
CONTINGENCY PLANNING		
Emergency Management Plan		

Relevant Condition	Requirement	Management Plan Reference
158	In relation to activities, which in the event of a disruption to operations may result in significant pollution being emitted, the Applicant must: a) conduct an assessment to determine the potential internal and external causes of disruption of operations at the premises; b) determine how these disruptions would impact on operations; and c) identify the pollution that would result due to the disruption of operations and what impact the pollution would have on the health of the community and then environment.	Refer to the ERP
159	In relation to matters identified in Condition 158, as part of the LEMP, the Applicant must prepare an Emergency Management Plan. The Plan shall address, but not necessarily be limited to: a) identification of threats to the environment and/or public health that could arise in relation to the construction and operation of Waste Management Facility and Intermodal Facility including the transportation of waste. These threats may include fire (waste transportation or within the landfill), overflow, dam failure, power or other utility failure, natural disaster etc; b) identification of strategies to minimise and ameliorate the effects of any groundwater surface water pollution identified from the groundwater and surface water monitoring programs; c) an estimate of the cost of implementation; d) actions to effectively respond to the disruption of operations so the risk of pollution is minimised; e) a communications strategy for alerting relevant agencies and the potentially affected community in the event of the disruption to operations leading to significant pollution; f) ensuring that all relevant employees are familiar with the emergency management plan; and g) any chemical storage required to operate the LTP and be consistent with the Department of Planning and Environment's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'. The Applicant should regularly review the adequacy of the plan obtaining expert advice as required.	Refer to the ERP
159A	Prior to the operation of the LTP, or within such further period as the Secretary may agree, the Applicant shall prepare and submit a revised Emergency Management Plan to the Secretary for approval. The plan shall include the site changes in MOD 2 and MOD 3, in accordance with the requirements of Condition 159.	Noted

Relevant Condition	Requirement	Management Plan Reference
Safety Management System		
159B	A comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. Records from the Safety Management System must be kept on-site and must be available for inspection by the Secretary upon request. The Safety Management System shall be consistent with the Department of Planning and Environment's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.	Noted
Chemical Storage		
159C	The Applicant must store all chemicals, fuels and oils used on-site in accordance with: (a) the requirements of all relevant Australian Standards; and (b) the NSW EPA's *'Storing and Handling of Liquids: Environmental Protection – Participants Handbook'* if the chemicals are liquids. In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement must prevail to the extent of the inconsistency.	Noted
COMPLAINTS PROCEDURES		
160	Prior to the commencement of construction, the Applicant shall establish a free-call telephone line that operates 24 hours per day 7 days per week on which complaints about the subject development can be registered. The Applicants shall record details of all complaints received and actions taken in response to complaints in an up-to-date log book. The Applicants shall ensure that an initial response to complainants is provided within 24 hours and detailed response within 10 days of the complaint being lodged. The system must also be provided with a complaint verification procedure which correlates potential sources of odours with an operation or activity by assessing relevant meteorological data.	Noted and addressed in Section 4.3.4 of the LEMP
161	The complaints register shall be available for inspection upon request by the Secretary, EPA, DPI-Water, and the CLC.	Noted
Complaints Handling Procedure		

Relevant Condition	Requirement	Management Plan Reference
162	Within two months of the date of the approval of MOD 2, a complaints handling procedure must be submitted to the Secretary for approval. The procedure shall be prepared in consultation with the Department, Goulburn-Mulwaree Council, the EPA and the Community Liaison Committee. The complaints handling procedure must include; • a formal complaint/incident reporting procedure; • and investigation procedure; and • a complaint resolution procedure. A report of the complaint and the response/action taken and timeframe required to resolve the complaint must be made publically available on the Applicant's website within 7 days of a complaint being made. Note; the level of detail contained in the report of the complaint shall be determined in consultation with the Department, Golburn-Mulwaree Council, the EPA and the Community Liaison Committee.	Noted and addressed in Section 4.3.4 of the LEMP.
163	The Applicant shall provide a report to the Secretary of the complaints received, the response/action taken and timeframe in accordance with Condition 162, on an annual basis which is to be submitted within the AEMR. The report shall include all the matters required within subsections of Condition 162.	Noted and addressed in Section 5.1.3 of the LEMP.
164	From the commencement of MOD 2, the Applicant shall make the following information publically available on its website as is required by the consent; a) a copy of all current statutory approvals; b) a copy of the Environmental Management Plan required under this approval; c) a copy of any Annual Environmental Monitoring Report including monitoring results (over the last 5 years d) a copy of any Independent Environmental and Odour Audit, and the Applicant's response to the recommendations in any audit; e) report of the complaints and the response/action taken to resolve the complaint as required in Condition 162; f) a copy of the minutes of the Community Liaison Committee Meeting; and g) any other matter required by the Director-General.	Noted and addressed in Section 4.3.3 of the LEMP.

Appendix D - Supplementary Environmental Management Plans

Appendix D1 Air Quality and Greenhouse Gas Management Plan

Appendix D2 Soil and Water Management Plan

Appendix D3 Leachate Management Plan

Appendix D4 Noise Monitoring and Management Plan

Appendix D5 Landscape and Vegetation Management Plan

Appendix D6 Emergency Response Plan

Appendix E – LTP Maintenance Schedule

LTP Initial Maintenance Schedule

Operation	System	Asset Name	Routine Title	Task Description	Freq /yr
Leachate Plant	Screen system	Dewatering press	Screw Press Mechanical service	Remove accessible parts of screen cylinger to access internals of press. Inspect and perform adjustment of wear bars. Inspect screw for signs of cracks, wear, damage or corrosion. Perform close inspection of apertures in fine, medium and coarse screens fo	1
Leachate Plant	Electrical	Power distribution, power supply	Electrical Service	Replace batteries	0.33
Leachate Plant	UF	Membrane modules	Membrane autopsy	Perform assessment of sample membrane (s) to assess condition with respect to levels of contaminant fouling at the ends and in the middle of the membrane fibres.	0.5
Leachate Plant	Decanter	Decanter	Mechanical service (lubrication)	Lubricate main drive pillow-block bearings as required. Lubricate conveyor bearings as required. Inspect labyrinth seal for washing failure	12
Leachate Plant	supply air biology	Blowers	Mechanical Servicing	Perform oil change. Inspect enclosure fan for dust and clean as required. Visually check the intake structure for signs of corrosion, cracks, damage or dirt buildup. Clean and repair as required. Check resilient mount for looseness, cracks or tearing by l	1
Leachate Plant	Inlet biology	Filter bags	Mechanical Service	Inspect filters and replace element as required	4
Leachate Plant	Screen system	Dewatering press	Oil Change	Change oil in gearbox. Analyse sample for signs of deterioration.	0.5
Leachate Plant	supply air biology	Ventilators	Mechanical Service (lubrication)	Lubricate fan and/or motor bearings as required.	6
Leachate Plant	Cooling biology	Ventilating fan	Mechanical Service (lubrication)	Lubricate fan and/or motor bearings as required.	6
Leachate Plant	Instrument air	Piston compressor	Compressor Mechanical Service	Change lubricating oil. Replace oil filters. Inspect rubber mounts and replace if required. Check output of compressor. Check mounting bolts. Check relief valve operates on test bench. Check compressor coupling bolts for tightness.	1
Leachate Plant	Denitrification	Mixers	Mixer Mechanical Service	Remove mixer with lifting cable and inspect mixer motor, shaft, blades, shroud, cable gland. Remove fouling or ragging as required. Replace oil and check discarded oil quality to identify signs of discolouration and milkiness (i.e. signs of water ingress)	1
Leachate Plant	supply air biology	Blowers	Lubrication (motor)	Grease motor bearings with of required specification grease.	2
Leachate Plant	Decanter	Screw conveyor	Service (Lubrication)	Apply grease as required.	4
Leachate Plant	Screen system	Dewatering press	Screw Press Mechanical inspection	Perform external mechanical inspection of equipment and open housing inspection ports, checking for signs of damage to screens and/or leaks. Check oil level in gearbox. Lubricate grease bearings (if required). Inspect bearings and check for abnormal noise	4
Leachate Plant	Electrical	Power distribution, lightning and earth protection	Earthing Protection Inspection	Test earth grid and inspect for signs of damage or corrosion. Inspect lightning protection system for signs of damage or corrosion and measure impedence	1
Leachate Plant	Infrastructure	Fire protection, hydrant	Compliance Service (1-monthly)	Perform inspections and testing, and record results in accordance with Section 4 of the Standard (AS 1851).	12

Leachate Plant	Electrical	Lighting, emergency	Compliance Inspection (6 monthly)	Carry out inspection and tests in accordance with requirements of the Standard (AS 2293.2).	2
Leachate Plant	Electrical	HV/LV Transformer	Electrical Service	Isolate equipment. Inspect and clean contacts and insulators for air-break switches. Functional check of protective devices. Calibration check of overcurrent relay. Calibrate temperature sensor. Sample oil and conduct oil analysis	1
Leachate Plant	Electrical	MCC	Electrical Inspection of Switchboard	Perform visual and IR inspection of switchboard internals to identify high resistance joints and/or loose connections. Inspect cabinet doors and structure for signs of water, damage, vermin or corrosion.	1
Leachate Plant	Electrical	MCC	Switchboard Examination	Examine switchboard in accordance with the requirements of the standard (AS 2467).	0.2
Leachate Plant	supply air biology	Blower3	Electrical inspection & calibration	Functionally check switches and gauges. Check motor cable terminations for tightness.	0.5
Leachate Plant	Decanter	Decanter	Mechanical diagnostic inspection	Perform borescope inspection of bowl, baffles and area around nozzle to confirm there is no excessive product bridging / buildup. Verify access cover interlocks operate.	1
Leachate Plant	Warming	Heat exchangers	Compliance Inspection (External)	Perform external structural inspection of process vessel	0.5
Leachate Plant	Infrastructure	Fire protection, hydrant	Compliance Service (6-monthly)	Perform inspections and testing, and record results in accordance with Section 4 of the Standard (AS 1851).	2
Leachate Plant	Infrastructure	Fire protection, portable extinguishers	Compliance Service (6-monthly)	Perform inspections and testing, and record results in accordance with Section 10 of the Standard (AS 1851).	2
Leachate Plant	Infrastructure	Civil Works (Bund Wall, Slip Road, Hard Stand)	Structural Inspection	Inspect structure for signs of cracks, errosion, corosion or damage. Report.	0.2
Leachate Plant	Infrastructure	Davit Arm	Compliance Major Inspection	Carry out servicing, inspection and testing in accordance with requirements of manufacturer's recommendations and Standard (AS 2550.1). Document as required in Standard.	0.14
Leachate Plant	Decanter	Decanter	Electrical diagnostic inspection	Perform IR inspection of motors and motor circuit analysis. Check and replace as required vibration proximity sensor.	0.5
Leachate Plant	Decanter	Decanter	Electrical inspection	Inspect main drive motor casings, connections and cooling fans. Inspect backdrive motor brushes for signs of wear. Visually check integrity of earth bonding strap.	2
Leachate Plant	Fresh water	Safety showers	Compliance Inspection and Service	Inspect shower to assure conformance with the requirements of this Standard (AS 4775). Inspect pipework (and insulation) for signs of damage or corrosion. Inspect and clean filters and nozzles. Functional test of shower and perform flow test.	1
Leachate Plant	Denitrification	Mixers	Compliance Inspection	Inspect lifting davit or fixed lifting points.	1
Leachate Plant	Infrastructure	Davit Arm	Periodic Third Party Inspection	Perform inspections and testing in accordance with the requirements of the Standard (AS 2550.1)	1
Leachate Plant	Infrastructure	Fire protection, hose reel	Compliance Service (6-monthly)	Perform inspections and tests, and record results in accordance with Section 9 of the Standard (AS 1851).	2
Leachate Plant	Infrastructure	Fire protection, hydrant	Service (5-yearly)	Perform servicing, inspections and testing, and record results in accordance with Section 4 of the Standard (AS 1851).	0.2

Leachate Plant	Infrastructure	Fire protection, portable extinguishers	Service (5-yearly)	Perform servicing, inspections and testing, and record results in accordance with Section 10 of the Standard (AS 1851).	0.2
Leachate Plant		Panel Tank Stairs/Platform	Structural Inspection	Visually inspect platforms, walkways, guardrails and supporting structure for signs of cracks, wear and structural damage from corrosion and fatigue.	0.2
Leachate Plant	Decanter	Decanter	Structural inspection	Visually inspect centrifuge frames for signs of cracking, damage or corrosion. Visually inspect vibration mounts for signs of fatigue, wear or damage.	0.2
Leachate Plant	Cooling biology	Ventilating fan	Structural inspection	Visually inspect fan and motor casings and mountings for signs of corrosion or structural fatigue	0.2
Leachate Plant	supply air biology	Ventilators	Structural inspection	Visually inspect fan and motor casings and mountings for signs of corrosion or structural fatigue	0.2
Leachate Plant	Infrastructure	Shed and Building Works (Shed and Plinths)	Building Structural inspection	Perform structural inspection of building and roof, assessing integrity of foundations, platforms, ladders, stairs, supporting beams and pillars.	0.1
Leachate Plant	UF	Wash pump UF	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant		Transfer Tank pump	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Nitrification	Jet Pumps	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	UF	Cleaner pumps	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	UF	Circulation pumps UF	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Inlet biology	Feed Pump Biology	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Nitrification	Nitrate Recirculation Pump	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Well water	pressure booster station	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Anti foaming	Transfer Pump Antifoam	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Screen system	Truck discharge pump	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Fresh water	Pressure Booster Station (FW)	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Screen system	Transfer pumps	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Polymer	Raw Polymer Transfer Pump	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Feed decanter	Centrifuge Feed Pump	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Well water	pressure booster station	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant		Pipeworks	Structural Inspection	Inspect pipe supports for signs of cracks, corrosion or damage. Inspect pipe body for cracks.	0.5
Leachate Plant	Cooling biology	Cooling Water Pump	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Methanol	Methanol supply truck pump	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5

Leachate Plant	Inlet biology	Feed Pump Biology	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Centrate decanter	Discharge Pump Centrate	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant		SS seamless pipework	Structural Inspection	Inspect pipe supports for signs of cracks, corrosion or damage. Inspect pipe body for cracks.	0.5
Leachate Plant	UF	Permeate pumps UF	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Inlet Ultrafiltration UF	UF Feed Pump	Structural inspection	Inspect mounting points, baseplate and casing for signs of damage or cracks. Check tightness of mounting bolts to ensure correct torque.	0.5
Leachate Plant	Fresh water	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Inlet Ultrafiltration UF	UF Feed Pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Fresh water	Safety shower	Operating Inspection	(Operator Task) Check operation of safety shower by activating shower and verifying movement of fluid.	52
Leachate Plant	Inlet Ultrafiltration UF	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Inlet Ultrafiltration UF	UF Feed Pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Fresh water	Safety shower	Operating Inspection	(Operator Task) Check operation of safety shower by activating shower and verifying movement of fluid.	52
Leachate Plant	Inlet Ultrafiltration UF	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Inlet Ultrafiltration UF	Flow meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	Fresh water	Safety shower	Operating Inspection	(Operator Task) Check operation of safety shower by activating shower and verifying movement of fluid.	52
Leachate Plant	Infrastructure	Air condition	Conditioning Mechanical Inspection	Confirm correct operation of the unit. Inspect the air filters, clean air filter or replace when necessary. Check condensation drain is not blocked.	2
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Infrastructure	Civil Works (Bund Wall, Slip Road, Hard Stand)	Inspect Pit Covers	Lift covers, inspect cover supporting beams and fasteners for signs of damage, looseness, cracking or corrosion. Inspect covers for damage.	1
Leachate Plant	Infrastructure	Civil Works (Bund Wall, Slip Road, Hard Stand)	and Inspection	Cleaning and inspection of structure	1
Leachate Plant	Anti foaming	Dosing pump anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Feed decanter	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Instrument air	Piston compressor	Operator Inspection	Check compressor for correct operation. Inspect pipework, flexible hoses and joints for leaks.	52
Leachate Plant	Electrical	Power distribution, power supply	Electrical Inspection	Inspect cabinet, batteries and rectifier. Check for correct operation.	1
Leachate Plant	Electrical	VSD	Clean VSD Air Filters	Inspect and clean filters (change if required).	2

Leachate Plant	Feed decanter	Centrifuge Feed Pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Feed decanter	Centrifuge Feed Pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Anti Foaming	Antifoam Tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Instrument air	Condensate drain	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	Fresh water	Pressure Booster Station (FW)	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Feed decanter	Flow meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	Anti foaming	Dosing pump anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Instrument air	Condensate drain	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	Feed decanter	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	Fresh water	Fresh water storage tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Fresh water	Fresh water storage tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Fresh water	Fresh water storage tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Fresh water	Pressure Booster Station (FW)	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Feed decanter	Flow meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1
Leachate Plant	Inlet	Flow meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Infrastructure	Shed and Building Works (Shed and Plinths)	Safety inspection	Perform safety inspection of accessible areas. Check safety devices, signage, platforms, doors and access areas. Inspect service pipework for signs of leaks and corrosion.	1
Leachate Plant	Infrastructure	Trace heating - circuits	Operator Checks	Inspect heater for signs of leaks or damage	52
Leachate Plant	Anti foaming	Dosing pump anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Infrastructure	Shed and Building Works (Shed and Plinths)	inspection and clean	Inspect roof and gutters. Remove leaves, debris and clean as required. Identify any areas requiring repair.	0.5
Leachate Plant	Infrastructure	Ventilator	Operator Checks	Inspect heater for signs of leaks or damage	52

Leachate Plant	Infrastructure	Shed and Building Works (Shed and Plinths)	Grounds Security Inspection	Inspect building for security issues and signs of pests/vermin. Inspect grounds for signs of weeds.	2
Leachate Plant	Inlet	Flow meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	Inlet	Level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Inlet biology	Feed Pump Biology	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Inlet biology	Feed Pump Biology	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Inlet biology	Feed Pump Biology	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Inlet biology	Feed Pump Biology	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Inlet biology	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Infrastructure	Heating	Operator Checks	Inspect heater for signs of leaks or damage	52
Leachate Plant	Anti foaming	Dosing pumps anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Anti foaming	Dosing pump anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Anti Foaming	Antifoam Tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Anti foaming	Dosing pump anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Infrastructure	Davit Arm	Compliance Routine Inspection	Perform inspections in accordance with the requirements of the Standard (AS 2550.1)	4
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Anti foaming	Dosing pump anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Inlet biology	Flow meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Infrastructure	Security system, general	Security Inspection	Inspect perimeter fencing for signs of intrusion or damage. Check condition of gate locks. Check number of visitors badges at security desk/reception.	12
Leachate Plant	Anti foaming	Dosing pump anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4

Leachate Plant	Inlet biology	Flow meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1
Leachate Plant	Inlet Ultrafiltration UF	Flow meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1
Leachate Plant	Cooling biology	Water meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	Caustic soda	Dosing pump caustic soda	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Caustic soda	Dosing pump caustic soda	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Caustic soda	Caustic soda tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Caustic soda	Caustic soda tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Cooling biology	Thermometer	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Cooling biology	Thermometer	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Caustic soda	Caustic soda tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Biocide	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Electrical	MCC	Compliance Push Button Tests of RCDs	Perform Push-button testing of all portable and fixed residual current devices (RCDs) in accordance with the requirements of the standard (AS 3760)	2
Leachate Plant	Cooling biology	Water meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1
Leachate Plant	Caustic soda	Heater	Operator Checks	Inspect heater for signs of leaks or damage	52
Leachate Plant	Decanter	Centrifuge bowl drive	Electrical Testing	Perform insulation resistance test on motor windings. Check that electrical cabinet is clean, dry and free from damage.	1
Leachate Plant	Decanter	Centrifuge bowl drive	Motor Electrical Inspection	Check wiring and terminals for signs of looseness or damage. Check that motor retaining bolts are secure and there are no signs of cracking or corrosion. Check earth strap is secure.	0.5
Leachate Plant	Decanter	Centrifuge bowl drive	Motor Lubrication	Inspect and clean grease points. Apply grease to motor bearings.	1
Leachate Plant	Decanter	Centrifuge screw drive	Electrical Testing	Perform insulation resistance test on motor windings. Check that electrical cabinet is clean, dry and free from damage.	1
Leachate Plant	Decanter	Centrifuge screw drive	Motor Electrical Inspection	Check wiring and terminals for signs of looseness or damage. Check that motor retaining bolts are secure and there are no signs of cracking or corrosion. Check earth strap is secure.	0.5
Leachate Plant	Decanter	Centrifuge screw drive	Motor Lubrication	Inspect and clean grease points. Apply grease to motor bearings.	1
Leachate Plant	Biocide	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Biocide	Dosing pump biocide	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Cooling biology	Water meter	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5

Leachate Plant	Cooling biology	Cooling Water Pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Centrate decanter	Centrate tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Centrate decanter	Centrate tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Centrate decanter	Centrate tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Centrate decanter	Discharge Pump Centrate	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Centrate decanter	Discharge Pump Centrate	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Centrate decanter	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Centrate decanter	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Centrate decanter	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	Caustic soda	Dosing pump caustic soda	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Cleaning Decanter	Water meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	Caustic soda	Dosing pump caustic soda	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Cooling biology	Cooling Water Pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Cooling biology	Heat exchanger	Operating Inspection	Visually inspect outside of plates plus pipe flanges for signs of leaks or damage.	52
Leachate Plant	Caustic soda	Overfill Sensor	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Cooling biology	Heat exchanger	Operating clean	Apply chemical clean to plates to prevent scale formation	12
Leachate Plant	Cooling biology	Level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Cooling biology	Thermometer	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Cooling biology	Thermometer	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Caustic soda	Leakage Sensor	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Biocide	Biocide Tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Cleaning Decanter	Water meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1

Leachate Plant	Electrical	Equipment, power tools / portable equipment	Compliance Test and Tag Appliances	Perform test and tag of portable office electrical equipment as per AS3760.	1
Leachate Plant	Biocide	Dosing pump biocide	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Denitrification	Mixer	Electrical Inspection	Perform visual inspection on motor starter. Perform resistance check. Inspect cabinet and ensure clean and dry and free from damage. (If fitted with VSD, inspect VSD filters and fans. Clean and replace as required.)	1
Leachate Plant	Anti foaming	Transfer Pump Antifoam	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Anti foaming	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Denitrification	Mixer	Electrical Inspection	Perform visual inspection on motor starter. Perform resistance check. Inspect cabinet and ensure clean and dry and free from damage. (If fitted with VSD, inspect VSD filters and fans. Clean and replace as required.)	1
Leachate Plant	Denitrification	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Denitrification	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Electrical	Control system, local control panel	Panel Electrical inspection	Inspect (and perform IR) of panel to identify overloaded points / hot spots, loose connections and moisture. Inspect cabinet frame for signs of corrosion, damage, compromised security and pests. Clean dust inside panel.	1
Leachate Plant	Antiscaling	Antiscalant Tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Electrical	Equipment, power tools / portable equipment	Compliance Test and Tag Appliances	Perform test and tag of portable office electrical equipment as per AS3760.	0.2
Leachate Plant	Antiscaling	Antiscalant Tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Electrical	HV/LV Transformer	Physical (Mechanical) Inspection	Visually inspect transformers for oil leaks and action repairs as needed. Inspect dessicant for colour change and replace as required.	2
Leachate Plant	Anti foaming	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Caustic soda	Ultrasonic level measurement	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Anti foaming	Dosing pump anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Electrical	MCC	Operating Time Tests of RCDs	Perform Operating Time testing of all portable and fixed residual current devices (RCDs) in accordance with the requirements of the standard (AS 3760)	1
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Anti foaming	Dosing pump anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Anti foaming	Dosing pump anti foaming	performance test	Perform calibration drop test to confirm correct dosing.	4

Leachate Plant	Electrical	Equipment, power tools / portable equipment	Compliance Test and Tag Appliances	Perform test and tag of portable electrical equipment as per AS3760.	2
Leachate Plant	Decanter	Screw conveyor motor	Electrical Testing	Perform insulation resistance test on motor windings. Check that electrical cabinet is clean, dry and free from damage.	1
Leachate Plant	Anti foaming	Dosing pump anti foaming	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Decanter	Decanter	Operating checks	(Operator Task) Visually inspect operating machine to identify signs of blockages, spillage / overflows or other problems with dewatering. Identify correct operating parameters. Visually inspect drain manifold to ensure not blocked.	52
Leachate Plant	Decanter	Screw conveyor	Mechanical Inspection	Inspect casing and drive. Inspect screw and liner for signs of wear. Check oil level in gearbox and top up as necessary.	2
Leachate Plant	Biocide	Biocide Tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Balance tank	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Balance tank	Level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Nitrification	Aeration Tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Balance Tank	Balance Tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Anti foaming	Transfer Pump Antifoam	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Balance Tank	Balance Tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Biocide	Biocide Tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Decanter	Screw conveyor motor	Motor Electrical Inspection	Check wiring and terminals for signs of looseness or damage. Check that motor retaining bolts are secure and there are no signs of cracking or corrosion. Check earth strap is secure.	0.5
Leachate Plant	Decanter	Screw conveyor motor	Motor Lubrication	Inspect and clean grease points. Apply grease to motor bearings.	1
Leachate Plant	Balance Tank	Balance Tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Decanter	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	Antiscaling	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Antiscaling	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Antiscaling	Dosing pump anti scaling	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Antiscaling	Dosing pump anti scaling	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Antiscaling	Antiscalant Tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2

Leachate Plant	Instrument air	Piston compressor	Mechanical Inspection	Inspect air system for signs of leaks. Check and clean inlet air filters. Check compressor lube oil level and top up as required Inspect and clean strainer. Check flexible hose for signs of wear, cracking or damage.	3
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	permeate tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	UF	pH electrode	Operating Service	Visually inspect, check for leaks and clean. Calibrate as required	12
Leachate Plant	UF	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	UF	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	UF	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	UF	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	UF	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	UF	Rack	Instrument Inspection and Tests	Functional calibration check of probes	1
Leachate Plant	UF	Rack	Structural Inspection	Perform inspection and NDT as required on pipework and vessels	0.2
Leachate Plant	UF	Rack	Operating inspection	Inspect filter housing and pipework for leaks	52
Leachate Plant	UF	Circulation pump UF	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Permeate pump UF	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1

Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Resistance thermometer	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	UF	Flow meter	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Nitrification	Aeration Tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	UF	Circulation pump UF	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	UF	Circulation pump UF	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	UF	Cleaner pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	UF	Cleaner pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	UF	Cleaner pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	UF	Cleaner pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	UF	Cleaner pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	UF	Cleaner pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	UF	Cleaner Tank 1/2/3	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	UF	permeate tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	UF	Cleaner Tank 1/2/3	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	UF	permeate tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1

Leachate Plant	UF	Flow meter	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	UF	Flow meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1
Leachate Plant	UF	Flow meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	UF	Flow meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1
Leachate Plant	UF	Flow meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	UF	Flow meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1
Leachate Plant	UF	Flow meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	UF	Permeate pump UF	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	UF	Permeate pump UF	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	UF	Permeate pump UF	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Cleaner Tank 1/2/3	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant		Anoxic Tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	well water	Bore water storage tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	well water	Bore water storage tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	well water	Bore water storage tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Well water	pressure booster station	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Well water	pressure booster station	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Well water	pressure booster station	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Well water	pressure booster station	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2

Leachate Plant	Well water	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Well water	Solenoid valve pneumatic actuator	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	washing decanter	Electric drive	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant		Anoxic Tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Warming	Thermometer	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant		Anoxic Tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant		Anoxic Tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant		Anoxic Tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant		Anoxic Tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant		Panel Tank Stairs/Platform	Structures Safety	Inspect ladders, platforms, support structures, walkways and guardrails for signs of corrosion, damage or loose fasteners.	1
Leachate Plant		Pipework	Operator Checks	Inspect pipework for leaks or damage.	52
Leachate Plant	Electrical	PLC	Inspection	Inspect and clean inside panel. Backup PLC program. Check UPS batteries and charger for correct operation.	1
Leachate Plant	Electrical	PLC	Servicing (UPS)	Replace UPS batteries	0.33
Leachate Plant		SS seamless pipework	Operator Checks	Inspect pipework for leaks or damage.	52
Leachate Plant		Transfer Tank pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant		Transfer Tank pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Well water	Water meter	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	UF	Temperature sensor	Operating Service	Visually inspect, check for leaks and clean. Calibrate as required	12
Leachate Plant	Supply air biology	Temperature switch	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1

Leachate Plant	UF	Strainer	Mechanical Service	External and internal inspection of strainer to identify signs of basket or casing corrosion, passing or damage. Internal cleaning if required) of strainer	4
Leachate Plant	UF	Strainer	Operating Checks	External inspection of strainer for leaks / signs of external damage	52
Leachate Plant	UF	Strainer	Mechanical Service	External and internal inspection of strainer to identify signs of basket or casing corrosion, passing or damage. Internal cleaning if required) of strainer	4
Leachate Plant	UF	Strainer	Operating Checks	External inspection of strainer for leaks / signs of external damage	52
Leachate Plant	UF	Strainer	Mechanical Service	External and internal inspection of strainer to identify signs of basket or casing corrosion, passing or damage. Internal cleaning if required) of strainer	4
Leachate Plant	UF	Strainer	Operating Checks	External inspection of strainer for leaks / signs of external damage	52
Leachate Plant	washing decanter	Electric drive	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Strainer	Operating Checks	External inspection of strainer for leaks / signs of external damage	52
Leachate Plant	UF	Solenoid valve pneumatic actuator + limit switch open/close	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	UF	Turbidity sensor	Operating Service	Visually inspect, check for leaks and clean. Calibrate as required	12
Leachate Plant	UF	Wash pump UF	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	UF	Wash pump UF	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	UF	wash tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	UF	wash tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	UF	wash tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Warming	Heat exchanger	Operating Inspection	Visually inspect outside of plates plus pipe flanges for signs of leaks or damage.	52
Leachate Plant	Warming	Heat exchanger	Operating clean	Apply chemical clean to plates to prevent scale formation	12
Leachate Plant	Warming	Thermometer	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Warming	Thermometer	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Warming	Thermometer	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	UF	Strainer	Mechanical Service	External and internal inspection of strainer to identify signs of basket or casing corrosion, passing or damage. Internal cleaning if required) of strainer	4
Leachate Plant	Nitrification	Level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Nitrification	Aeration Tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2

Leachate Plant	Nitrification	Flow meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1
Leachate Plant	Nitrification	Flow meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	Nitrification	Jet Pump 1	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Nitrification	Jet Pump 1	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Nitrification	Jet Pump 1	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Nitrification	Jet Pump 1	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Nitrification	Jet Pump 2	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Nitrification	Jet Pump 2	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Nitrification	Jet Pump 2	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	UF	Circulation pump UF	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Nitrification	Level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Nitrification	Aeration Tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Nitrification	Nitrate Recirculation Pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Nitrification	Nitrate Recirculation Pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Nitrification	Oxygen sensor	Operating Service	Visually inspect, check for leaks and clean. Calibrate as required	12
Leachate Plant	Nitrification	Oxygen sensor	Operating Service	Visually inspect, check for leaks and clean. Calibrate as required	12
Leachate Plant	Nitrification	pH electrode	Operating Service	Visually inspect, check for leaks and clean. Calibrate as required	12
Leachate Plant	Nitrification	pH electrode	Operating Service	Visually inspect, check for leaks and clean. Calibrate as required	12
Leachate Plant	Nitrification	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Nitrification	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Nitrification	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Nitrification	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5

Leachate Plant	Nitrification	Jet Pump 2	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Methanol	Methanol supply truck pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Instrument air	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Instrument air	Refrigerant compressed air dryer	Air Dryer Mechanical Service	Confirm correct operation of unit. Inspect unit for signs of leaks, damage or corrosion. Check and claen filters and drains.	4
Leachate Plant	Methanol	Dosing pump methanol	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Methanol	Dosing pump methanol	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Methanol	Dosing pump methanol	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Methanol	Dosing pump methanol	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Methanol	Flow meter	Physical Inspection	Inspect flowmeter indicator, transmitter and supports for leaks, damage or corrosion	1
Leachate Plant	Methanol	Flow meter	and Flow Verification	Visually inspect and verify correct flowmeter reading	1
Leachate Plant	Methanol	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Methanol	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Nitrification	Aeration Tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Methanol	Methanol supply truck pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Nitrification	Aeration Tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Methanol	Methanol tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Methanol	Methanol tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Methanol	Methanol tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Methanol	Methanol tank level litres indicator	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Methanol	Methanol tank level percentage indicator	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Methanol	Methanol tank Level transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Methanol	Methanol tank Level transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5

Leachate Plant	Methanol	Methanol tank Level transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Methanol	Methanol unloading pump discharge flow switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Anti Foaming	Antifoam Tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Phosphoric acid	Dosing pump phosphoric acid	performance test	Perform calibration drop test to confirm correct dosing.	4
Leachate Plant	Methanol	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Screen system	Transfer pump 2	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Nitrification	Temperature sensor	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Screen system	Dewatering press	Operating checks	(Operator Task) Open housing inspection ports and check for correct operation, and for signs of leaks, blockage or product buildup.	52
Leachate Plant	Screen system	dewatering screw press motor	Electrical Testing	Perform insulation resistance test on motor windings. Check that electrical cabinet is clean, dry and free from damage.	1
Leachate Plant	Screen system	dewatering screw press motor	Motor Electrical Inspection	Check wiring and terminals for signs of looseness or damage. Check that motor retaining bolts are secure and there are no signs of cracking or corrosion. Check earth strap is secure.	0.5
Leachate Plant	Screen system	dewatering screw press motor	Motor Lubrication	Inspect and clean grease points. Apply grease to motor bearings.	1
Leachate Plant	Screen System	Flow meter	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Screen System	Level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Screen System	limit switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Screen System	limit switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Screen System	Pressure transmitter	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Screen system	curved screen motor inlet valve	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	Screen system	Transfer pump 1	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Screen system	curved screen motor	Motor Lubrication	Inspect and clean grease points. Apply grease to motor bearings.	1
Leachate Plant	Screen system	Transfer pump 2	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Screen system	Transfer tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Screen system	Transfer tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Screen system	Transfer tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2

Leachate Plant	Screen system	Truck discharge pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Screen system	Truck discharge pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	supply air biology	Blower 1	Inspection	Visually check oil chambers for correct level and signs of oil leakage / seepage; top up if required. Visually inspect enclosure fan, particularly the blades for signs of cracking at blade base. Visually check that the filter dP is within the specified r	3
Leachate Plant	supply air biology	Blower 2	Inspection	Visually check oil chambers for correct level and signs of oil leakage / seepage; top up if required. Visually inspect enclosure fan, particularly the blades for signs of cracking at blade base. Visually check that the filter dP is within the specified r	3
Leachate Plant	supply air biology	Blower 3	Inspection	Visually check oil chambers for correct level and signs of oil leakage / seepage; top up if required. Visually inspect enclosure fan, particularly the blades for signs of cracking at blade base. Visually check that the filter dP is within the specified r	3
Leachate Plant	Supply air biology	Temperature switch	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Supply air biology	Temperature switch	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5
Leachate Plant	Screen system	Transfer pump 1	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Polymer	Polymer makeup station	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Instrument air	Piston compressor	Electrical Inspection	Inspect motor terminal box and check terminations for tightness. Functional check of instruments.	0.5
Leachate Plant	Phosphoric acid	Dosing pump phosphoric acid	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Phosphoric acid	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Phosphoric acid	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Phosphoric Acid	Phosphoric Acid Tank	Instrument Calibration	Functionally test float switch and other tank instrumentation.	1
Leachate Plant	Phosphoric Acid	Phosphoric Acid Tank	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Phosphoric Acid	Phosphoric Acid Tank	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Polymer	Flow meter	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Polymer	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Polymer	level switch	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Screen system	Dewatering press	Electrical inspection	Replace (or clean) inverter filters. Inspect and change fans if required. Inspect motor casing to ensure that it is clean and free from damage.	1
Leachate Plant	Polymer	Polymer Dosing Pump	inspection and clean	Inspect pump externals for signs of leaks, damage, or abnormal operation. For chemicals that crystallise (alum, fluoride, etc), isolate pump, open and clean scale from check valves	2
Leachate Plant	Nitrification	Temperature sensor	Instrument Calibration	Perform functional calibration check of sensor. Inspect transmitter, sensor and supports for signs of corrosion or damage. Check for signs of ingress of water into instrument.	0.5

Leachate Plant	Polymer	Polymer makeup station	Operating Checks	(Operator Task) Externally inspect tank pipework and bund floor for signs of leaks and damage. Inspect bund coating, joints and concrete for signs of wear, delamination or degradation.	52
Leachate Plant	Polymer	Polymer makeup station	inspection and bund	Perform external + internal inspection of tank vessel, pipework . Inspect condition of joints, plinths and anchors. Test watertight integrity of secondary containment system	0.2
Leachate Plant	Polymer	Raw Polymer Transfer Pump	Operating checks	Visually inspect externals of pump and packing/seal for signs of damage or leaks. Listen for unusual sounds for signs of noise in bearings.	52
Leachate Plant	Polymer	Raw Polymer Transfer Pump	inspection and lubrication	Externally inspect pump, couplings, mechanical seal for signs of leaks, damage or corrosion. Check and provide top-up lubrication as required. Inspect externals of pump and motor casings, clean as required.	2
Leachate Plant	Polymer	Solenoid valve	Mechanical Inspection	Visually inspect condition of valve for leaks and signs of corrosion, cracks or damage. Inspect sensors, actuators and limit switches as well as supports.	1
Leachate Plant	Polymer	Water meter	Instrument Calibration	Inspection of switch and supports plus functional calbration check	0.5
Leachate Plant	Screen system	curved screen	Lubrication	Correctly lubricate drive chain. Inspect drive chain and sprockets for signs of damage. Check drive chain for correct tightness and adjust as required.	12
Leachate Plant	Screen system	curved screen	Mechanical Service (Oil Change)	Inspect auger for signs of wear and damage. Change auger oil and visually inspect removed oil for signs of contamination. Change drive gearbox oil and visually inspect removed oil for signs of milkiness (water ingress) and for excessive wear metals and di	0.5
Leachate Plant	Screen system	curved screen	Mechanical Inspection	Visually inspect screen apertures for signs of localised scouring, areas of diminished thickness. Inspect auger for signs of wear and damage. Check the oil level in the auger gearbox by removing the level plug and visually checking that the oil level is n	2
Leachate Plant	Screen system	curved screen motor	Electrical Testing	Perform insulation resistance test on motor windings. Check that electrical cabinet is clean, dry and free from damage.	1
Leachate Plant	Screen system	curved screen motor	Motor Electrical Inspection	Check wiring and terminals for signs of looseness or damage. Check that motor retaining bolts are secure and there are no signs of cracking or corrosion. Check earth strap is secure.	0.5
Leachate Plant	Polymer	Polymer Dosing Pump	performance test	Perform calibration drop test to confirm correct dosing.	4